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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

396th Meeting

Wednesday, 8 June 1994, 10 a.m.
Vienna

Chairman: Mr. HOHENFELLNER . . . . (Austria)

In the absence of the Chairman, Mr. Forna (Romania), Vice-Chairman, took the Chair.

The meeting was called to order at 10.15 a.m.

Attendance by non-members of the Committee

The Chairman: I should like to inform members of the Committee that I have received a note verbale from Saudi Arabia in which it requests permission to attend the current session of the Committee on the Peaceful Uses of Outer Space as an observer. I should therefore like to suggest that, in conformity with past practice, we invite that delegation to attend the current session and to address the Committee as appropriate.

This is, of course, without prejudice to further requests of this nature, and does not involve any decision by the Committee concerning status. It is a courtesy we customarily extend to delegations.

If there is no objection, we shall proceed accordingly.

It was so decided.

Organization of work

The Chairman: Since many delegations still wish to speak in the general exchange of views, it is my intention to continue and conclude the general debate at this afternoon's session. Upon completion of the general debate, we will immediately begin our consideration of agenda item 4, "Ways and means of maintaining outer space for peaceful purposes". Time permitting, we will also begin consideration of item 5, "Report of the Scientific and Technical Subcommittee on the work of its thirty-first session", and item 7, "Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space". Following the past practice of the Committee, these items will be considered jointly. I urge all delegations wishing to speak on them to inscribe their names on the list of speakers as soon as possible.

General exchange of views *(continued)*

Mr. Bourez (Argentina) *(interpretation from Spanish):* Since this is the first statement by the delegation of Argentina at this session, I should like to join previous speakers in expressing our satisfaction at seeing Mr. Hohenfellner again presiding over our Committee, this time in the splendid city of Vienna, which continues to demonstrate its traditional hospitality and cordiality.

I should also like to thank the Chairman for his clear introductory statement, which reminded us of the progress made in the last year, as well as of the various subjects that we shall be discussing at the present session. We are sure that his proven experience in guiding this Committee will enable us to continue our fruitful endeavours in this forum.

My delegation would also like to thank Mr. Jasentuliyana for his statement and the staff of the Office for Outer Space Affairs for the efforts that they have made in organizing our session.

This record contains the original texts of speeches delivered in English and interpretations of speeches delivered in the other languages. Corrections should be submitted to original speeches only. They should be incorporated in a copy of the record and be sent under the signature of a member of the delegation concerned *within one week of the date of publication* to the Chief, Verbatim Reporting Section, Room C-178, United Nations, New York, NY 10017, and incorporated in a copy of the record. Corrections will be issued after the end of the session in a consolidated corrigendum.

As the Argentine delegation said during the last session of the Scientific and Technical Subcommittee, my country is currently in the process of reorganizing its space structure with a view to making it consistent both with new international circumstances and with national circumstances and fitting it to the civilian nature of the space programme and its legal and political structure.

Aware of the importance of space science and technology in the contemporary world, we have decided to adopt a new approach in our space activities, giving priority to a better relationship between our national interests, available resources and efforts to ensure international cooperation with third countries. We are working out the necessary means and ways of perfecting and adopting a new space plan which will deal with all these aspects.

In this spirit, we have set up a new national space activities commission that is entirely subject to the national Government and is of an entirely civilian nature and will ensure the exclusively peaceful use of outer space.

The new Argentine national plan is centered on the economic applications of space science and technology for the benefit of the community. It is not based on security considerations, which subject community interests to military considerations.

In this connection, both the Ministry of Defence and the armed forces of our country have given their full support to the civilian nature of the Argentine space programme. In this context, we are analysing alternatives for the recycling of the Falda del Carmen facilities, which are subject to a study that could result in the setting up of a centre for space activities in our country.

Over the last year, the Argentine Republic has continued its programmes and space projects, ensuring objective priority to be given to those programmes in order to make them consistent with the current circumstances of the country.

The major achievements over this period, as a result of the application of new national policies, are centred on the development and construction of the scientific research satellite SAC-B, a project which is being carried out jointly with the United States National Aeronautics and Space Administration (NASA) and with the cooperation of Brazil and Italy, and the putting out to tender of work on the Nahuel satellite communications system, the development and realization of which are being carried out without any State funding.

The Argentine Government also took a decision, in December 1993, to initiate a programme for the development, construction and launching into orbit of a series of small satellites, the first of which, known as SAC-C, will be constructed in cooperation with NASA and will be designed for observation of the surface of the Earth. This satellite will be situated in the polar orbit and will contain a medium-resolution camera built in Argentina in cooperation with Germany. It is due to be launched in 1998.

Since space activities are intrinsically international, international cooperation in this field is essential and vital, and coordination is required to match interests and capacities and the various resources of all our various countries. In this context, our country attaches priority to all promotion of international cooperation and to projects that will allow Argentina to initiate processes of cooperation with third countries in the field of the exclusively civilian uses of outer space. It is for that reason that the Argentine Government wishes to make available to other countries, through the negotiation of bilateral agreements, data which will be obtained through the scientific activities of the SAC-C satellite, which should be made available within seven days.

Also, the Argentine Government has attached particular importance and given its support to the implementation in our country, together with the European Space Agency, of the "Second Euro-Latin American Space Days", which were held last May with the participation of more than 100 experts and officials from various countries in Latin America, the Caribbean and Europe.

Another area of particular attention for our country is the initiative of the Office for Outer Space Affairs to establish regional space technology and science education centres. We wish to reiterate the full support of the Argentine Government for that initiative and to offer our cooperation and participation in the regional centre to be established in Latin America and the Caribbean.

We also wish to join other delegations which have expressed interest in proceeding to an analysis of the methods and systems of work of our Committee and its two Subcommittees. We believe that this subject requires our attention, and we think that the establishment of a working group would make it possible to deal with this issue properly and perhaps produce some suggestions on patterns of operation so that the Committee and its two Subcommittees might be more effective and efficient in their work.

All delegations have agreed that in the new international order that has recently emerged, the use of outer space represents an activity which deserves priority attention from States.

In conclusion, the Argentine delegation wishes to reiterate its unwavering support for the work of this Committee, as an important forum for interaction and the exchange of opinion and experience between our countries and as a body that formulates guidelines for space activities, with a view to perfecting international legal norms in this sphere and bringing them into line with the progress which has been made in recent years in space science and technology.

Mrs. Ok (Turkey): Since this is my first statement here, allow me, Sir, to congratulate you on your election as Chairman of the Committee on the Peaceful Uses of Outer Space. My delegation has full confidence that your able chairmanship will lead this session to a successful conclusion. I also wish to extend our appreciation to the Secretariat, and in particular to Mr. Jasentuliyana and his staff, for their excellent work in preparing for this session of the Committee.

As a member of the Committee since 1977, Turkey is deeply interested in its work and in that of its Subcommittees. Space activities are rather new in Turkey. However, both the legal and the scientific and technical aspects of the issue are closely followed and observed by the Turkish authorities, and the necessary organizational adjustments are then made to respond efficiently to the requirements brought about by such activities.

A major space activity in Turkey in 1993 was the Eurasian Space Symposium, which was attended by approximately 250 scientists and engineers from 16 countries. A plenary discussion at the end of that meeting resulted in a decision to establish a standing committee to make it a traditional event. The committee, with members from Turkey, Russia, Ukraine, Azerbaijan, Khazakstan, Uzbekistan and Turkmenistan, decided to hold the Second Eurasian Space Symposium in Kiev in September 1994 and the third one in Baku in 1995.

In 1993, the construction of the National Observatory Site proceeded on schedule near the southern city of Antalya, at an altitude of 2,400 metres above sea level, away from optical and electromagnetic interference. The facilities will be open to international use and collaboration.

In addition, the first national telecommunications satellite, TURKSAT 1B, owned and to be operated by the Turkish PTT, is scheduled for launch in July 1994, following the unfortunate failure of TURKSAT 1A during its launch in January 1994. Built by the French company Aerospatiale, the satellite will again be launched by an Ariane rocket from French Guyana, this time to a 31-East geosynchronous position.

The satellite will carry 16 transponders operating in the Ku band and covering three geographical regions. These are centred over Turkey, Western Europe and Central Asia. The types of services provided by TURKSAT 1B include direct television and radio broadcasting; telephone, fax, data and telex services via IBS stations; support of private networks for bank, hotel, airlines and so on; remote control systems; diplomatic services; and security services.

Television reception by 60-120 cm. antennas will be possible in individual homes to accommodate the five public and dozens of private broadcasting channels in Turkey. The satellite will be controlled by two ground stations near Ankara, one main and one back-up station. The designed life of TURKSAT 1B is a minimum of 10 years, but it is expected to be 13 years.

Concluding my remarks, I wish to reiterate that, as a party to the outer space Treaty of 1967 and other relevant international arrangements, we highly honour the guiding principles, such as the principle that the exploration and use of outer space must be for peaceful purposes and should be carried out for the benefit of all countries, irrespective of the degree of their levels of development. We also believe that international cooperation to the broadest possible extent is indispensable to the implementation of such principles.

Mr. Weyens (Belgium) *(interpretation from French):* At the outset, I should like to take this opportunity to greet you, Sir, the other members of the Bureau and the delegations of the countries represented here.

In reviewing the questions to be addressed during the current session, I should like first to express Belgium's satisfaction that the question of space debris is being taken up for the first time this year by the Scientific and

Technical Subcommittee. We feel that this matter should be dealt with there in an in-depth manner before being analysed from the legal standpoint.

As to the problem of nuclear power sources, my delegation entirely concurs with the conclusions of the Legal Subcommittee concerning the revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space. The analysis by the Scientific and Technical Subcommittee of the utilization of nuclear power sources should entail a year-long suspension of the work of the Legal Subcommittee on this subject. It took nearly 15 years of discussion before the General Assembly adopted these Principles in 1992. Belgium therefore attaches no urgency to their revision.

As to the application of legal principles aimed at guaranteeing that all States share in the spin-off benefits of space exploration and research, my delegation would like to stress that any cooperation in space activities should be carried out freely between sovereign States on a bilateral or multilateral basis - for instance, through the European Space Agency. A charter of principles favouring developing countries is therefore not particularly desirable.

I should like to thank the secretariat for its report on questions relating to the possible convening of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. My delegation wishes to stress that if such a conference were to be held it should be prepared very carefully and given a well-defined objective. Furthermore, my delegation feels that we should also apply the recommendations of UNISPACE 82, a matter tackled by the Scientific and Technical Subcommittee at its last session, on the basis of the report of the Working Group of the Whole entrusted with evaluating the implementation of those recommendations.

As to the Committee's possible expansion, the Chairman should pursue the consultations initiated last year on this question so that a recommendation can be drafted by the Committee this year. My delegation would accept a limited and balanced expansion, and fully supports the request of Spain that it be allotted a permanent seat.

As to the organization of work, my delegation feels that we could further improve our work if we showed greater flexibility in drawing up the agenda of the Committee and its Subcommittees. Perhaps we should also consider reducing the length of the sessions, particularly those of the Legal Subcommittee.

I should like briefly to describe the space activities of my country. As the fourth largest net contributor to the budget of the European Space Agency (ESA), Belgium is an active participant in various Agency projects at a very high technological level, in the optional space infrastructure programmes, Columbus and Ariane-5, and in the user programmes such those for Earth monitoring, telecommunications and microgravity.

Belgium also takes part in programmes aimed at highlighting the importance of cooperation. One of these is the MIRAS programme, which involves Russian-Belgian scientific cooperation to carry an infrared Earth-monitoring spectrometer on board the Russian orbital space station MIR 2. This will make it possible to carry out continuous global observations for several years.

Belgium is also taking part in the SPICAM-S project, which aims to determine the composition of the atmosphere of the planet Mars by sunlight analysis. This project is an experiment developed in collaboration with the Institut d'Aéronomie de Belgique, the French Centre National de Recherches Scientifiques, the French Centre National d'Etudes Spatiales and the Institute for Space Research of the Academy of Sciences of the Russian Federation.

Belgium's work on the use of satellite images to support lasting development and the efficient management of natural resources in developing countries is also important. Since 1985 there has been a national research programme on remote-sensing by satellite, land management and mapping and on their applications in developing countries. A second phase of the programme began in 1989 in order to diversify the fields of research and to develop operational applications. In the third phase of the programme, initiated in 1993, the emphasis is on the development of new applications based on geographical information systems.

Following the Rio Conference on sustainable development, Belgium signed the biodiversity and climate Conventions, as well as the Forest Principles, committing itself to applying remote-sensing and geographical information systems.

An intergovernmental agreement between Belgium and France guarantees Belgium's participation in the development of a remote-sensing system by SPOT satellite. An extension of this project, which the European Union is backing to the tune of 50 per cent, aims at monitoring natural and cultivated continental ecosystems through the

VEGETATION instrument to be carried by the SPOT 4 satellite.

Belgium plans to construct a low-orbit communications mini-satellite to meet the needs of non-governmental organizations and humanitarian organizations.

In conclusion, my delegation hopes that at this session the Committee will again achieve fruitful results, and we wish the Committee every success.

Mr. Fiuza Neto (Brazil): Permit me to convey, at the outset, the satisfaction of the Brazilian delegation at seeing Ambassador Hohenfellner once again presiding over the deliberations of the Committee on the Peaceful Uses of Outer Space (COPUOS). His experience and dedication to this Committee, which have been amply demonstrated in the past, will certainly be needed during the present session, given the important questions we face in the days ahead. He can be assured of my delegation's full cooperation.

The Brazilian delegation would also like to thank the Government of Austria for its commitment to the continuing excellence of this body, a commitment that is evident in the high priority accorded to the process of relocating the Committee's headquarters to Vienna.

Before moving on to the substantive items on our agenda, I would like to extend a word of sincere gratitude to the Chairmen of the Scientific and Technical Subcommittee and of the Legal Subcommittees, respectively, Professor John Carver and Dr. Václav Mikulka, in recognition of their essential role in ensuring the successful conclusion of the difficult but highly productive 1994 sessions of those subsidiary bodies.

The Brazilian delegation would also like publicly to pay tribute to the staff of the Office for Outer Space Affairs, for their personal sacrifice translated into such a smooth transfer to Vienna, to the benefit of all the members of this Committee.

Finally, we would like to thank Ambassador Aurel-Dragos Munteanu for his tenure as Vice-Chairman of COPUOS and wish you, Ambassador Petru Forna, success in your new role in the Committee.

This past Monday we welcomed Ambassador Hohenfellner's comprehensive analysis of past and present achievements in the domain of outer space, and of the responsibilities which lie ahead for this Committee, particularly as regards the present session.

As he pointed out, one of the main purposes of COPUOS is to promote international cooperation in outer space for the benefit and in the interest of all mankind. It is the belief of the Brazilian delegation that never has the international scenario been as favourable as it is at present for the achievement of this goal. It is therefore imperative that we seize the opportunity to act.

The Secretary-General, in his timely report entitled "International cooperation in space activities for enhancing security in the post-cold-war era", underlines that

> "the time has come to expand international cooperation in space activities, through both a revitalization of existing mechanisms and the development of new mechanisms for international cooperation."

and that

> "new initiatives should be taken to ensure that all countries have access to the benefits of space activities." *(A/48/221, para. 4)*

It can hardly be disputed that this Committee constitutes the best existing mechanism for the promotion of international cooperation in outer space. However, there also remains no doubt that much could be done to improve the effectiveness of COPUOS and increase the benefits of its activities. We must strive, therefore, to address international cooperation in outer space in all its aspects, be they political, economic, security or environmental.

The ongoing discussions in the Legal Subcommittee on the item regarding outer space benefits represent one of the ways through which this body can deal in an all-encompassing manner with the question of international cooperation. As Ambassador Hohenfellner appropriately stated yesterday, the constructive debate held on this subject during the thirty-third session of that Subcommittee allows for a great deal of optimism and hope for future progress, not only in terms of the item itself, but in the sense of developing a new consciousness of the importance of international cooperation truly geared towards the benefit of all mankind.

It seems odd, on the other hand, that this Committee has been kept out of the discussion of the security aspects of cooperation in outer space as a whole -

namely, ways and means of maintaining outer space for peaceful purposes and the prevention of its militarization. It seems evident that, as these questions are obviously interrelated, they should be addressed accordingly. Therefore, the establishment of an effective dialogue between COPUOS and the Conference on Disarmament could eliminate some of the loopholes in the treatment of this significant aspect of international cooperation in outer space.

As regards the environmental aspects of international cooperation in outer space, there is a growing awareness that space technology offers a unique means of monitoring and protecting the environment. The important results of the United Nations Conference on Environment and Development, held in Rio de Janeiro in June 1992, bear witness to this fact. As this awareness grows ever faster, the international community will turn to the skies, and question why the outer space environment, as an extension of the Earth's environment, has not yet been the object of comprehensive treatment by this Committee.

The inclusion of the item on space debris on the agenda of the Scientific and Technical Subcommittee was thus long overdue. This is made evident by the growing pressure to have space debris taken up by the Legal Subcommittee as well. When we address this matter, we must keep in mind, as the representative of the Netherlands appropriately pointed out in his statement yesterday, that COPUOS was for a long time a pioneer body in the elaboration of international law, often anticipating the turn of events. We cannot, therefore, allow this Committee to be overtaken by events. Rather, we must endeavour to place it once again in the vanguard of international lawmaking.

In this spirit, the Brazilian delegation suggested last March, during the thirty-third session of the Legal Subcommittee, that a seminar on the legal implications of the existence of space debris in the geostationary orbit be organized by COPUOS to provide additional input to our deliberations. The very interesting and informative statement made yesterday by the representative of the International Law Association (ILA) seems to indicate not only that the discussion of this theme is necessary and urgent, but also that it must be handled in a comprehensive manner. We hope, therefore, that such a seminar is held in the near future.

The Brazilian delegation feels that the thirty-seventh session of the Committee provides an excellent opportunity for reflection on our future work. Not only must we decide how to address, from the point of view of substance, the aspects of international cooperation that I have mentioned, but we must also consider, from a structural and organizational perspective, how we are going to do so.

The possibility of an enlargement of the outer space Committee has already been the object of previous discussions in the Committee. As we had the opportunity to state last year, the acceptance of new Committee members is agreeable to the Brazilian delegation, since it would only reflect the growth in the membership of the United Nations in recent years. However, any enlargement must be based on the principle of equitable geographic distribution, taking into account the interests of the various regional groups, with a view to correcting existing imbalances in the proportionality of representation in the Committee. An acceptable formula can certainly be arrived at, so long as delegations show a reasonable degree of flexibility and a spirit of compromise.

Reference has been made by some delegations to the possibility of examining at this session of the Committee the reduction of the sessions of the Committee and its subsidiary bodies, and in particular of the Legal Subcommittee. Although the Brazilian delegation is prepared to participate in informal consultations on this subject, it firmly believes that this should be dealt with by the Legal Subcommittee itself, as it has never been the tradition of this Committee to impose vertically on its Subcommittees decisions regarding matters that have not yet matured in those subsidiary bodies.

Furthermore, it must be remembered that only last year the Legal Subcommittee took the step of adopting a set of procedural rules regarding its working methods. These consensus measures were applied during the thirty-third session of the Subcommittee by its Chairman, and achieved a high degree of success. Although I am unable to provide exact figures, the efficiency ratings of this year's session far exceeded the average ratings for the United Nations as a whole. This, at least for us, is an indication that a similar procedure could be followed in future sessions with equal success and, more important, without compromising the Legal Subcommittee's ability to deal with the substantive items of its agenda.

The Committee will also have to examine the possibility of convening a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 3). It is our understanding that such an event could conceivably constitute a window of opportunity for identifying the new mechanisms for international cooperation alluded to by the Secretary-General in his report. Therefore, the decisions which might devolve from a third UNISPACE conference must not be construed as representing a substitute for this Committee, or as an indication that the Committee is unable to fulfil its main objectives. Rather, they should be carefully analysed as an opportunity to enhance and complement the very work of the Committee.

In this sense, Brazil favours the holding of a third UNISPACE. We do so, however, on the grounds that it must be preceded by a careful preparatory process in order to define a set of sharply focused objectives. Also, the follow-up of such a conference must be properly thought out in advance, so that its decisions can be duly implemented. It is the position of my delegation, therefore, that the achievement of a consensus with regard to the various aspects of holding UNISPACE 3 is essential for success. The working papers presented at the thirty-first session of the Scientific and Technical Subcommittee and the report presented by the secretariat constitute a good basis for our discussions on this topic.

Before closing, I would like to touch very briefly upon some of the cooperative enterprises in which my country is engaged. I would like to highlight especially in this regard the continuing participation of our National Institute for Space Research (INPE) in the Programme on Space Applications, through the offer of training fellowships in various areas relating to space activities.

Brazil, as members know, launched in February of 1993 its first indigenous satellite, the SCD-1, on an environmental data gathering mission. Earlier this year, a Brazilian delegation visited Bolivia, Peru, Ecuador and Colombia, with a view to discussing forms of cooperation in the utilization of the satellite. A similar mission will soon be sent to other countries of the region, so that maximum cooperation can be extracted with respect to this accomplishment of the Brazilian space programme. A second satellite of the same type is scheduled to be launched next year, and a third data-collection satellite has already been approved for development.

As of August 1994, Brazil will be taking part, through INPE, in a cooperative programme with the United States involving the launching of 33 sounding rockets from the Alcantara launch range in north-eastern Brazil. This project, known as Guara, will be geared towards the study of the Earth's magnetic equator.

Brazil is also developing two remote sensing satellites in conjunction with China. This enterprise, known as the CBERS project, constitutes the first cooperative endeavour of its kind between developing countries. Brazil places a high priority on the successful conclusion of the CBERS project, which can serve as a paradigm for future cooperation in space technology between developing countries.

In February of this year, the Brazilian Space Agency was created to coordinate all aspects of the Brazilian space programme. This civilian agency is directly under the control of the presidency of the Republic, and will, we hope, facilitate cooperation with similar organizations in other countries.

At the same time, the Brazilian Government formally announced its decision to observe the guidelines of the Missile Technology Control Regime. This decision stems from Brazil's commitment to international efforts with regard to the non-proliferation of weapons of mass destruction.

We believe that these measures will enable Brazil to participate more effectively in international cooperation in outer space, with a view to promoting the social and economic development of its people.

Mr. Lee (Republic of Korea): On behalf of my delegation, I wish to extend our appreciation to the Chairman and through him to the members of the Committee for giving us this opportunity to take part in the current session of the Committee as an observer. I am confident that Ambassador Hohenfellner's skilful leadership will guide this session to a fruitful conclusion.

Allow me also to pay a tribute to the Government of Austria and to the Office for Outer Space Affairs, headed by Mr. Jasentuliyana, for having so successfully completed the smooth transfer to Vienna and the new start of the Office in its new home.

The recent changes in the international environment have opened a new era for increased international cooperation in space-related activities. Indeed, space exploration and technology are no longer seen as a race between East and West.

When this Committee was first established, the earnest desire of the international community was to avoid the extension of cold-war rivalry into outer space and to reserve this common heritage of mankind exclusively for peaceful purposes. As the world has entered a post-cold-war era, the Committee is now in a position to focus its energy on its positive mandate: how to promote the exploration and use of outer space for peaceful purposes and to ensure that the benefits derived from this exploration are made available to all States.

As was pointed out by the Chairman in his opening statement, the recent cooperative space mission between the United States and Russia has heightened the newly emerging dimensions of international cooperation for the peaceful uses of outer space. In the years ahead, all of us have to redouble our efforts to make full use of the present momentum to further strengthen international cooperation in space activities for the benefit of all humanity.

This being my first intervention in this Committee, allow me to present the basic position of my Government regarding international space activities.

First, as outer space is a common heritage as well as the last frontier of mankind, we believe that the exploration and utilization of outer space must be exclusively for peaceful purposes and devoted to the common benefit and interests of all States, regardless of their stage of economic and scientific development, thereby contributing to the economic and social development of all nations.

Secondly, rapid developments in space technology and its applications necessitate efforts on the part of the international community to regulate and manage both ongoing and future space activities by establishing an appropriate legal framework. My delegation is of the view that, in the course of establishing this framework, the needs of both developed and developing countries should be fully taken into account in a balanced manner.

Thirdly, international cooperation in the peaceful uses of outer space should be further strengthened to encourage the sharing of space resources and technology. In this regard, my Government strongly supports a more active United Nations role in this field and believes that various national, regional and international programmes to promote international space activities should be developed within the framework of the United Nations.

Fourthly, we believe that a third UNISPACE conference should be held in the near future in view of the rapid political and technical changes affecting space programmes undertaken around the world.

I should now like to introduce briefly the space activities undertaken thus far by the Republic of Korea.

We have participated actively in space activities over the past few years. In 1992 and 1993, we successfully launched two scientific satellites, KITSAT-1 and KITSAT-2, respectively. In the middle of 1995, we will start operating the first Korea Satellite System (KOREASAT), which will then be followed in 1998 by the launching of another satellite, the Korea Multi-purpose Satellite System (KOMSAT). KOMSAT will be used for Earth observation, covering land, sea and coastal zones, as well as for telecommunications and broadcasting.

My delegation particularly wishes to draw the attention of the Committee to the fact that, though Korea is yet to become a member of COPUOS, it has already made contributions to the efforts of the United Nations to promote international space activities.

As part of the United Nations Programme on Space Applications, my Government hosted the United Nations Workshop on Space Communications for Development in 1992 in cooperation with the Office for Outer Space Affairs. At this Workshop, the Republic of Korea was designated as the site for the secretariat of the Asia-Pacific Satellite Communication Conference, and in cooperation with this organization, my Government is currently preparing for another workshop on satellite communications in November this year.

The Korean delegation participated in both the thirty-first session of the Scientific and Technical Subcommittee and the thirty-third session of the Legal Subcommittee this year, as an observer, and followed discussions there with keen interest.

The Republic of Korea is also an active member of other major international organizations regulating space activities such as INTELSAT (International Telecommunication Satellite Organization) and INMARSAT (International Maritime Satellite Organization).

My Government attaches great importance to the promotion of international cooperation in the peaceful uses of outer space. In light of its basic policy and the space-related activities I described earlier, my Government firmly believes that it has every reason to participate fully in the work of this Committee as a full member. This desire has been formally notified to the President of the General Assembly at its forty-eighth session in a letter addressed to him on 31 May 1994.

My Government believes that the issue related to membership of this Committee should be dealt with as a matter of urgency in light of the rapid advances in space sciences and technology and the significant increase in the number of States with space capabilities, including the Republic of Korea.

In particular, given the increasing importance of this Committee in the post-cold-war era, with its exclusive responsibility for matters related to outer space, the Committee is called upon to take immediate steps to incorporate active and interested States so as to remain relevant and effective under the rapidly changing international circumstances related to space activities.

My delegation believes that membership of the Committee should be open primarily to those States which are able and willing to contribute significantly to the work of the Committee. My delegation also supports the strengthening of the Committee by way of either expanding its membership or introducing an election system, while maintaining the principle of equitable geographical representation.

As one of the Member States which makes a significant contribution to the United Nations regular budget and which carries out increasingly significant space activities, the Republic of Korea is fully committed to enhancing international cooperation in the peaceful uses of outer space and stands ready to participate fully in and make a contribution to the work of this Committee.

My delegation hopes that the current session of the Committee will be able to reach consensus on this urgent issue so that my country can attend the next session of the Committee as a full member.

Mr. Hodgkins (United States of America): I should like to begin by extending my delegation's congratulations on your election, Sir, as Vice-Chairman and on Ambassador Hohenfellner's election as Chairman of this session of the Committee on the Peaceful Uses of Outer Space.

July 1994 marks the 25th anniversary of the lunar landing of Apollo XI. On 20 July 1969, Astronaut Neil Armstrong stepped on the lunar surface, telling millions on Earth who saw and heard him that it was "One small step for man; one giant leap for mankind". The first clear photographs of the Earth taken in preparation for that mission caused the people of the world to view Earth in a new way - as a "blue marble" in the vastness of space, a single environment with unique and overwhelming significance to mankind. The modern environmental movement was galvanized in part by this new perception of the Earth and the need to protect it and the life it supports. In 1970, the first "Earth Day" was held in the United States, followed by the International Earth Day that is celebrated each year.

Skylab, a follow-on to Project Apollo requiring the direct use of Apollo hardware and space technology and involving 28 other nations, was launched in 1973 and produced an unprecedented wealth of scientific data. In 1975, the Apollo-Soyuz Test Project was the first US/USSR cooperative space flight. When US astronauts and USSR cosmonauts rendezvoused in space for two days, Apollo-Soyuz showed that opposing super-Powers could be united in space exploration.

Recent years have involved unprecedented political change and have furthered international cooperation in space exploration to the benefit of all countries, as nations pool their scientific expertise and financial resources. Much of our attention today is focused on the application of space techniques to the understanding and solution of terrestrial problems, and this is entirely proper. But exploration of the solar system remains an enticing goal and an important objective as mankind seeks answers to fundamental questions of the origins of the universe and life itself. Project Apollo was an important early step in that ongoing process of seeking new knowledge, and we and our partners in the international Space Station Programme will move confidently down that road in the years ahead.

I mention the twenty-fifth anniversary of the lunar landing not with the intention of proposing a series of commemorative actions, though we might look to include some simple language in our report to the General Assembly. What is timely - and, we may hope, auspicious - about this anniversary in relation to the Committee's work today is the powerful expression given by the Apollo 11 mission to one of the cardinal principles of the 1967 outer space Treaty - the principle that the exploration of outer space shall be carried out for the benefit and in the interests of all countries. First endorsed by the General Assembly in 1958 in resolution 1348 (XIII) establishing the ad hoc Committee on the Peaceful Uses of Outer Space, this principle is one which the Committee has sought to apply to the fullest extent over the years. There is ample opportunity to broaden and strengthen its application at this session, through various items on the Committee's agenda.

For example, the agenda item on spin-off benefits affords us the opportunity to discuss how the benefits of space exploration can enrich the lives of people in a host of practical ways. We firmly believe that the multilateral process of dialogue and exchange of common experiences in this area can assist all of our efforts to apply space technology to the solution of problems on Earth. In addition, it will enlarge the opportunities for all nations to participate in the benefits derived from space exploration.

Another sterling example of how national space programmes can provide global benefits is in the area of satellite remote sensing. For more than 30 years, the United States has been operating satellite systems that have provided data on the land, oceans, and atmosphere on a public, non-discriminatory basis. Just recently, we have taken steps to maintain the long-term continuity of these important programmes.

My Government decided, on 5 May 1994, to converge the National Oceanic and Atmospheric Administration Polar-orbiting Operational Environmental Satellite System and the Defense Meteorological Satellite Programme into a single national civilian operational satellite system. The converged system will achieve cost savings, consolidate resources and reduce duplication of efforts. The converged system will be open in character and will continue open distribution of data worldwide via direct broadcast and established distribution systems. Current international cooperation will continue, and plans are under way to expand collaboration with EUMETSAT and the European Space Agency (ESA).

President Clinton also signed on 5 May the United States Land Remote Sensing Strategy for assuring continuity of Landsat data. Under this plan, the National Oceanic and Atmospheric Administration (NOAA), the United States National Aeronautics and Space Administration (NASA) and the Department of the Interior will work to maintain operation of Landsats 4 and 5; develop, launch and operate Landsat 7; and develop options for continuity of Landsat-type data beyond Landsat 7. These agencies will ensure that Landsat 7 data are available to all users worldwide at no more than the cost of filling user requests.

My delegation would like to join previous speakers in expressing satisfaction with the positive developments that have occurred in the Committee on the Peaceful Uses of Outer Space and its Subcommittees. The cooperative spirit in which we have worked over the past year is an encouraging sign that more can be accomplished in the future. We believe that the Committee is making real progress towards focussing its efforts on serving as an advocate for international cooperation in the peaceful uses of outer space in the United Nations system. This has not been easy, and our most important accomplishments have come only after long and serious negotiations culminated by compromise on the part of all Member States. Although there have been some skeptics in the past, the positive results we see today demonstrate that the principle of consensus can work effectively.

I wish to recall that my delegation and others have put forward detailed proposals over the past decade for improving the organization of work in the Committee and in its Subcommittees. Indeed, the Committee has concluded that strengthening international cooperation in the peaceful exploration and use of outer space implies the need for the Committee itself to improve, whenever necessary, the methods and forms of its work. We have always taken this mandate seriously. That is why, when taking stock of what has been achieved to date, we are gratified to see that many of these proposals have in fact been adopted. Of particular note have been the productive discussions in the Scientific and Technical Subcommittee, in the work of which space scientists and experts are now playing a central role.

On the other hand, we are convinced that more can be done on the question of working methods, particularly in the Legal Subcommittee. We have the impression that there is a willingness on the part of all Member States to continue seeking these reforms, which will make this Committee a more effective and efficient body in the United Nations system.

In conclusion, let me reiterate my delegation's full commitment to working with all Member States on making the work of the Committee as relevant as possible to the ever-expanding opportunities for international cooperation in space exploration.

Mr. Louet (France) *(interpretation from French):* On behalf of my delegation allow me at the outset, Sir, to congratulate you most sincerely on your election as Vice-Chairman of our Committee. Through you, I should like to express, as did my colleagues who spoke earlier, great satisfaction at seeing Ambassador Hohenfellner continue to preside over our work. Our Committee can be very proud of the fact that the very high office that he occupies in Vienna has not distanced him from the Committee on the Peaceful Uses of Outer Space. In doing so, Ambassador Hohenfellner is following a long tradition in Austria, one that has been strengthened today by the fact that from now we shall be meeting in Vienna.

It is not my intention, during this general debate, to deal with all the problems that make up our agenda, since I will be able to speak on each individual item later. Nevertheless, I would like to stress four matters that have particularly attracted the attention of my delegation.

First, I shall speak to agenda item 4 entitled, as usual, "Ways and means of maintaining outer space for peaceful purposes."

France remains firmly attached to the principle that the prevention of the arms race in space should fall exclusively within the purview of the Conference on Disarmament. We feel that resolution 44/112, paragraph 5, whereby the General Assembly

> "Reiterates that the Conference on Disarmament, as the single multilateral disarmament negotiating forum, has the primary role in the negotiation of a multilateral agreement or agreements, as appropriate, on the prevention of an arms race in outer space in all its aspects"

gives an exclusive mandate to the Conference on Disarmament and to its special committee for the prevention of an arms race in outer space. Resolution 48/74, adopted at the last General Assembly session, reiterates this in its paragraph 5. Therefore we interpret paragraph 37 of resolution 48/39 of 10 December 1993, in which the General Assembly requests the outer space Committee to continue to examine, as a matter of priority, ways and means of maintaining outer space used for peaceful purposes, as asking it to discuss only the peaceful aspects of the use of outer space, without encroaching on the mandate of the Conference on Disarmament.

Secondly, I shall comment on the possible convening of a new UNISPACE conference, which is being very closely examined in Paris.

Since 1982, the date of the last UNISPACE Conference, space technology has made significant and substantial progress. Space has become an essential tool in fields as different as telecommunications, earth observation and meteorology, to mention but a few.

The idea of a new Conference is therefore not totally unjustified. The delegations of India and Pakistan have presented a number of possible areas for reflection that deserve to be studied in detail. In addition, the Secretariat has carried out a very interesting report - which we are still analysing in Paris - that provides a number of very relevant arguments in favour of convening UNISPACE 3. This has the advantage of furthering discussion of the site and the cost of such a Conference.

Nevertheless, as we see it, the convening of this Conference continues to depend on the definition of a satisfactory agenda. We must now devote most of our work to elaborating an agenda that takes account of the developments that have taken place during the 1980s. Hence a thorough study is being carried out in Paris; this will enable my delegation to contribute to perfecting a suitable agenda at the next session of the Scientific and Technical Subcommittee.

The success of such a conference will depend on the quality of the preparatory work that this Committee must undertake. Judging by the example of UNISPACE 2 as it has been reported on by the Secretariat, this runs the risk of taking some time. It is therefore up to our Committee to select subjects that are important and also achieve consensus among all delegations.

Thirdly, yesterday morning the Austrian delegation mentioned the problem of enlarging our Committee. I did not intend to discuss this matter in the general debate, but what was said has inspired me to focus my thoughts. I am ready to tackle the question with an open mind, but I am hampered by the abstract nature of the debate.

The question is not and should not be one of whether we wish to increase the number of members of our Committee, but rather of which countries are candidates for membership. In other words, it is not a matter of simply setting up a number of places that some countries to be decided on will fill, but of bringing in those countries that we feel should become members of our committee.

For this reason, when we begin discussion of this matter, I would like to ask you, Mr. Chairman, for an answer to this question: Which countries are candidates? At the moment I can see only Spain and the Republic of Korea, whose candidacies have already been put forward and which of course have our full support.

There is a danger that this discussion will stagnate if it remains on an abstract level.

Fourthly, I am very grateful to the Spanish ambassador for his suggestion at the beginning of this session, during the adoption of our agenda, concerning the organization of the Committee's work.

I did not ask for the floor at that time because I understood that the Chairman wished to move quickly without bogging down in a procedural debate, and also because I understood that listing this question under the catch-all item "Other matters" did not rule out its consideration by a working group set up expressly to do so, as the Spanish ambassador requested.

My delegation very much hopes that this question will be analysed very carefully so that we can avoid the sorry spectacle we saw at the last session of the Legal Subcommittee.

The Chairman *(interpretation from French)*: I thank the representative of France for his very interesting proposals. I am sure that all the members of the Committee will take them into account, as they are all very important for the work of our Committee.

Mr. Wicks (United Kingdom): I would like to take this opportunity to express my delegation's satisfaction that Mr. Hohenfellner is again chairing the Committee and to offer our congratulations on your election, Sir. We are also grateful to the Chairmen of our two Subcommittees for their considerable efforts in seeking to promote constructive dialogue and in encouraging practical solutions to difficult problems. Our gratitude also goes to the Committee's Secretary and his colleagues in the Office for Outer Space Affairs for their support to the Main Committee and its Subcommittees.

The United Kingdom had long held the view that the issue of space debris warranted serious and formal consideration by Member States. We therefore welcomed the recommendation to refer the issue to the Scientific and Technical Subcommittee. Good progress has been made, and we look forward to further substantive discussion on space debris.

In the area of nuclear power sources, the United Kingdom has made significant contributions. The need to ensure the safe use of this energy source, the consideration of the possible consequences to the environment, and the possible revision of the principles has been the backdrop to our thinking on this issue. We acknowledge the conclusions of the Legal Subcommittee and will participate accordingly in any further debate in respect of the possible revision of the Principles.

The United Kingdom acknowledges the call for a third UNISPACE conference. But we are yet to be convinced fully of the need for such a conference. We nevertheless remain open to persuasion. In any further consideration, we will need to weigh carefully any lessons that can be learned from our experience with UNISPACE 2.

My delegation hopes that as we discuss the various issues over the coming days the spirit of cooperation within this Committee to reach solutions through compromise and consensus will continue to prevail, and that satisfactory outcomes to our deliberations, acceptable to all Member States, can be found.

Mr. Ramírez Landázuri (Ecuador) *(interpretation from Spanish)*: First, I would like to express my satisfaction at seeing Ambassador Hohenfellner of Austria once again presiding over this Committee. I am sure that his knowledge and experience will help us to conclude these discussions successfully. I also congratulate you, Sir, on your election as Vice-Chairman.

I would also thank Ambassador Hohenfellner for the clear and precise report he presented at the beginning of our session. My delegation fully agrees with his statement that space science and technology are vital instruments for improving the economic and social conditions of all countries and for resolving global problems. We must therefore work together in this Committee to ensure that the results of our discussions produce real, concrete benefits for our peoples and thus for the international community.

I would also like to congratulate Mr. Jasentuliyana and his staff on their successful transfer of the Office for Outer Space Affairs from New York to Vienna. My delegation assures him of its cooperation and assistance in the work ahead of us.

My delegation attaches particular importance to the sessions and reports of the Subcommittees. The serious and careful treatment of the subjects assigned to each Subcommittee, both from the legal and scientific point of view, and the incalculable value of their scientific and technical work, cannot be denied. We believe that an important step forward has been taken, which the Committee should endorse.

Allow me now to make a few comments on specific issues. With regard to outer space and the geostationary orbit, intensive and effective international

cooperation is absolutely necessary in order to disseminate the benefits of knowledge, programmes and projects equitably, bearing in mind the needs of the developing countries. Such international cooperation should promote the indigenous capacities of the underdeveloped countries, their programmes for the exploration and use of outer space and their knowledge of space science and technology and its applications. It should ensure easy access to information, data, materials, the results of research and so on, and, among other things, should promote and facilitate the transfer of technology.

The provision of resources for the funding of regional and subregional initiatives and projects in developing countries should be promoted and supported by the Office for Outer Space Affairs and, of course, by this Committee. In this context, I would like to refer to the establishment of an Andean subregional enterprise, or some other type of association, which would make it possible to exploit and use the satellite products of the Cotopaxi ground receiving station, which is located in Ecuador.

Ecuador's Centre for Integrated Remote Sensing of Natural Resources (CLIRSEN) is currently completing the contract for the beginning of a pre-feasibility study, based on the terms of reference approved by a technical commission created by the fifth Andean Presidential Council.

In this connection, we hope that countries with experience and resources in this sphere will share that experience with us and help us in our task. We also hope that the respective institutions responsible for this subject in the member countries of the Andean group will provide the necessary support and information required by the consultant for this study. I am referring to Bolivia, Colombia, Ecuador, Peru and Venezuela.

My delegation, like those of previous speakers, attaches special importance to the peaceful use of outer space and to its non-militarization. We welcome close cooperation between the United Nations bodies dealing with disarmament, such as the Conference on Disarmament, and COPUOS and its subsidiary bodies.

The pollution of outer space is also a subject of concern to my delegation. We are particularly worried about the increase in space debris, particularly in the geostationary orbit. This subject, which was addressed in the Scientific and Technical Subcommittee, also warrants more careful study by the Legal Subcommittee. It could be useful to hold a seminar on this subject, under the auspices of the Legal Subcommittee, at one of its future sessions.

My delegation believes that the Committee should give a clear signal as to the need to develop a legal and institutional framework for both outer space and the geostationary orbit, in which the principles and norms governing the subjects before us should be coordinated with international law as a whole. Because of the physical nature and technical attributes of the geostationary orbit, we believe that whether or not it forms part of outer space, on which there is no unanimous view, it merits special legal treatment, a *sui generis* treatment taking into account its specific attributes and properties with relation to our planet. This position is reflected in the reports of both the Scientific and Technical Subcommittee and the Legal Subcommittee.

We would thus have a secure frame of reference ensuring proper access and use, exclusively for peaceful purposes, of both outer space and the geostationary orbit for the benefit of all mankind, bearing in mind the interests of all States, particularly those which, because of a lack of technical and financial resources, have not yet developed their interests or exercised their rights, despite the geographical position which links them to the geostationary orbit.

Consequently, it is necessary to develop international instruments and to coordinate them with those which already exist.

My delegation considers that a third UNISPACE conference is necessary both in substance and in providing a forum, for it would be one of the most important forums in the post-cold-war world. In the Secretariat documentation we see a clear illustration of how a third UNISPACE conference could be organized. My delegation has taken note of the relevant paragraphs, specifically paragraphs 28 and 29 of the Secretariat report (A/AC.105/575), which set out some of the elements that justify holding the conference.

Nevertheless, my delegation would have preferred the Secretariat document to touch on some of the important subjects contained in the document submitted by the Group of 77 (A/AC.105/C.1/L.199). I refer in particular to the subject of jurisprudence, on which the Group of 77 suggests that further impetus should be given to the progressive development of international space law, particularly with respect to access to, and exploration, optimal utilization and benefits of the limited natural resources of space for peaceful applications, and its relationship to international environmental law and the norms governing non-proliferation, international security and confidence-building measures.

With respect to increasing the membership of the Committee, my delegation is not opposed to the idea, provided that the criterion of regional balance is respected in the composition of the Committee.

I wish finally to support the request of the representative of Spain with respect to the due use of Spanish as an official language, particularly in the documents and reports of the Committee. This would, of course, greatly facilitate any negotiating process.

My delegation pledges its support to the Chairman and all the other officers with a view to achieving true progress at this session towards conclusions on the peaceful uses of outer space.

Mr. Ionov (Bulgaria): I would like on behalf of the Bulgarian delegation to congratulate you, Sir, on your election to the vice-chairmanship of the Committee. Allow me also to express our pleasure at again seeing Ambassador Hohenfellner as Chairman of the Committee on the Peaceful Uses of Outer Space. Austria has always chaired this body; also, the two United Nations Conferences on the Exploration and Peaceful Uses of Outer Space were held here. Now that the full Committee is meeting for the first time at this venue, after the relocation of the Office for Outer Space Affairs to Vienna, we would like to extend our warmest greetings to our new hosts.

As an original member of the outer space Committee, Bulgaria is convinced of the common interest of mankind to use outer space for peaceful purposes and is fully aware of the importance of international cooperation in developing the rule of law. One of the main purposes pursued by Bulgaria in United Nations forums on space is, through international cooperation, to serve the cause of the peaceful uses of outer space and the strengthening of efforts for security and mutual understanding in the world.

Let me take a minute to highlight the situation in Bulgaria regarding the reorganization of space research and application activities. Bulgaria is one of the pioneers in central-eastern Europe in reorganizing its space activities in line with the change from a centrally planned to a free market economy. After careful study of the functions and organizational charts of various national space agencies in Europe, a Bulgarian space agency was established in 1993. We used as prototype the Austrian space agency. The Bulgarian Space Agency (BSA) is intended to become a national centre and to coordinate space activities in Bulgaria. It has already laid the foundations for the participation of Bulgarian industry in space projects and spin-off benefits.

Coordinating the space activities of State, science and industry in a country where the economy is recovering slowly, with central structures falling apart - not to mention the uneasy situation in the Balkans - is an extremely difficult task. Bulgaria will not abandon space research, but will make choices, and focus on selected activities. The noble ambition of preserving Bulgaria's relatively high space scientific and technical potential cannot be successful without the assistance of such organizations and bodies as this Committee, the European Space Agency (ESA), the United States National Aeronautics and Space Administration (NASA), and the Russian, German, Austrian and other space agencies. In that connection, we highly appreciate the recent cooperation agreements signed with the Russian and the German space agencies.

Bulgaria looks forward to participation in ESA programmes, which will help bridge the technological gap with the bigger member States and would provide the basis for advanced technological research. The European Space Agency is part of the European integration process and we wish to play a part in that process.

Regarding the work of the Subcommittees, we are pleased with the progress on some of the items on their agendas, especially that of the Scientific and Technical Subcommittee. We would particularly mention the encouraging presentations on the subject of space debris; we expect to see speedy progress on that matter.

The papers regarding a third UNISPACE conference, submitted in the same Subcommittee, form a good basis for discussions during the current session.

It is the task of all mankind to seek measures to enhance international initiatives for the preservation of the space environment, to assist in the protection of the Earth environment and to achieve sustainable development. The new era in international relations makes possible a range of new space activities - even improving the effectiveness of preventive diplomacy and peace-making activities. As one distinguished United Nations official puts it, outer space has constituted an exemplary area for international cooperation and it is important that this cooperation be continued and expanded to serve the interests of all countries.

I would like to express the hope of my delegation that the work of the current session of the Committee on the Peaceful Uses of Outer Space will be conducted in a constructive atmosphere, and that States will show good will and a desire for cooperation in the spirit of our times. My delegation is prepared to contribute to that end.

We hope to have the opportunity to speak later on specific agenda items.

Mr. Boroffice (Nigeria): First of all, the Nigerian delegation would like to join other delegations in expressing its pleasure at seeing Ambassador Hohenfellner again serving as Chairman of the Committee. His wealth of experience and demonstrated skills in successfully presiding over this Committee in the past gives us the confidence that we are again on the path to further achievements.

My delegation wishes to express its gratitude to the Chairmen of the two Subcommittees for successfully steering their sessions in 1994 and also to congratulate the Office for Outer Space Affairs on the smooth relocation of the secretariat to Vienna, which has not in any way diminished attendance at this session.

More than ever before, Nigeria recognizes the role of space science and technology in national development and human activities. Developments in this area continue to exert their influence in one way or the other on the societal, technological and cultural progress of all countries, large or small, developed or developing. The application of space science and technology will therefore play an increasing and indispensable role in the development of developing countries.

The Government of Nigeria is putting together a national policy on space science and technology which will be cost effective and ensure maximum use of opportunities offered by the existing space programmes of other countries and the United Nations and the development of local capabilities in matters of space science and technology.

Since assistance from, and cooperation with, other countries are vital to achieving the goals of the policy, the Government of Nigeria will encourage regional and international cooperation as a way of sharing the burden of major enterprises in space science and technology. My delegation is glad to report in this regard that the third United Nations/European Space Agency (ESA) workshop on Basic Space Science for Developing Countries was held in Nigeria in October 1993 as part of the United Nations Programme on Space Applications. The workshop, which was hosted by the National Agency for Science and Engineering Infrastructure on behalf of the Government of Nigeria, was co-sponsored by the Office for Outer Space Affairs of the United Nations, the European Space Agency and the Government of Nigeria.

In February 1994 the Regional Centre for Training in Aerospace Surveys (RECTAS) in Nigeria organized a workshop on the application of remote sensing in national development for policy makers in government Ministries and extra-ministerial departments.

Before the end of 1994 the National Agency for Science and Engineering Infrastructure will, in co-operation with the Food and Agricultural Organization (FAO), organize a workshop on the application of remote sensing in agriculture.

My delegation wishes to use this opportunity again to reiterate the readiness of the Government of Nigeria to host the proposed Regional Centre for Space Science and Technology Education.

One of the components of the space programme contained in our National Policy on Space Science and Technology is the establishment of a National Remote Sensing Centre. This Centre, which has been established in Jos, will take off before the end of 1994 with the acquisition of a high resolution picture transmission system that will receive information from NOAA satellites. The Centre will coordinate and harmonize all remote sensing activities in the country, including housing the central archive of remote sensing data in Nigeria. In collaboration with the Nigerian Meteorological Services, the Centre will set up receivers for satellite meteorological data at appropriate locations in the country for operational and research purposes.

My delegation notes the reports of the Scientific and Technical Subcommittee on the work of its thirty-first session, as contained in document A/AC.105/574, and that of the Legal Subcommittee on the work of its thirty-third session, as contained in document A/AC.105/573. We are pleased that substantial progress has been made on a number of items listed on the agenda. It is particularly encouraging that the subject of space debris should have been on the agenda of the Scientific and Technical Subcommittee. We believe that the decisions reflected in paragraphs 69, 70 and 71 of its report (A/AC.105/571) represent significant progress towards evolving appropriate and affordable strategies to minimize the potential impact of space debris on future space missions. We also note the views expressed in the Subcommittees on the question of access to the geostationary orbit, and welcome the decision of the Subcommittees to continue discussions on this issue in the hope that an early resolution will be reached.

My delegation notes the report prepared by the secretariat of the Office for Outer Space Affairs (A/AC.105/575) on the possibility of holding a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. It is our belief that this report will provide a good basis for further discussions on this subject. We therefore look forward to a more extensive discussion in this session which will lead to an early conclusion.

Ms. Skoog (Sweden): This is the first time the Committee on the Peaceful Uses of Outer Space has met in Vienna since the transfer of the Office for Outer Space Affairs. The continued chairmanship of Ambassador Hohenfellner guarantees the continuity of the Committee's work. Let us hope that this new setting will invigorate our work, as is required by the new tasks and challenges we face.

On our agenda for this meeting we have a number of important issues. Let me just elaborate on a few of these.

Sweden has long advocated that the issue of space debris be dealt with within COPUOS, and we were very satisfied with the decision last year to include the item on the agenda of the Scientific and Technical Subcommittee. The initial discussions in the Subcommittee proved constructive, and my delegation fully supports the recommendation that the initial emphasis should be put on making a thorough scientific and technical assessment of the present situation, in order to develop a common understanding of the issues involved and an appropriate definition of the problem. In this work, particular attention should be paid to the environmental aspects - something Sweden also underlined in the recent Commission on Sustainable Development. Only when we have a common understanding will it be possible to decide on further action to be taken. As a first step, an inventory of measures already undertaken by spacefaring nations to reduce the creation of new debris could be made. In order to make this information available to all countries, an overview of good management practices could be compiled and distributed.

Almost two years have now passed since the adoption of the Principles on nuclear power sources, and a recommendation on their revision must be made during this session. Discussions in the two Subcommittees demonstrated broad satisfaction with the Principles in their present form, and there was a consensus that it would be premature to undertake a revision at this early stage. Sweden shares the opinion that priority should be given to the implementation of the Principles, and that a revision should be undertaken only when we have elaborated a formula significantly strengthening them. For our further consideration of this item, Sweden's point of departure remains that in revising the Principles, it is important that they be harmonized with other, general safety principles for exposure to ionizing radiation.

We earlier expressed an open attitude towards the proposal to organize a third UNISPACE conference. At the same time, my delegation has stressed that careful consideration of the objectives of such a conference is essential. The purpose must be clear, and the time chosen must allow for adequate planning. We must also consider to what extent such a conference may achieve goals that cannot be obtained through the intensified or more focused work of, for example, COPUOS itself.

In our opinion, there certainly are a number of issues which merit further in-depth discussion. Some are dealt with in the Secretary-General's report on international cooperation in space - for example, how space technology can be used in support of international peace and security, and how the United Nations itself can best benefit from advances in space. A matter of high priority to Sweden is also the use of space technology to promote sustainable development, and in particular to implement the recommendations of Agenda 21, adopted by the United Nations Conference on Environment and Development. A further consideration of the possibilities of preventing and mitigating natural catastrophes would also seem appropriate.

International cooperation and the transfer of relevant know-how are necessary in order to facilitate the build-up of indigenous capabilities in developing countries, *inter alia* for planning and environmental purposes. Sweden recognizes the central role of the United Nations Programme of Space Applications in this process, and continues to actively support the Programme through annual training courses in remote-sensing education for educators in Stockholm and Kiruna. The fourth course is currently taking place and a fifth course is proposed for implementation in 1995.

Let me now turn to a matter of concern. During the last session of the Legal Subcommittee, it was evident to all delegations that much could be done to improve the effectiveness of the work of the Subcommittee. Most Member States, as well as the United Nations itself, are dealing with severe economic constraints - something we must take into account when planning our work here. It has been proposed to suspend the Working Group on Nuclear Power Sources of the Legal Subcommittee for a year. In light of this, we think that it is appropriate for the Committee to consider shortening next year's session of the Legal Subcommittee to two weeks.

In order to enhance the relevance of our work within the Committee, the composition of this forum needs to reflect the true range of the international space community. It is important to provide for the inclusion of States with relevant technology and expertise in the area. We also believe that our discussion here, as well as in other United Nations organizations, would benefit from mirroring a broader spectrum of views. As was previously stated, Sweden is looking forward to the early conclusion of the Committee's consideration of the question of its membership. We fully support the efforts of the Chairman of the Committee to find a universally acceptable solution to this important issue.

The Chairman: The next speaker on my list is the representative of the Committee on Space Research, Mr. Siegfried Bauer.

Mr. Bauer (Committee on Space Research): The Committee on Space Research (COSPAR) is most pleased to be able to address the thirty-seventh session of the United Nations Committee on the Peaceful Uses of Outer Space.

Speaking as a representative of the largest international community of scientists involved in basic research in space, let me strike an optimistic chord. It has often been said in the past, though perhaps more officiously than officially, that the main thrust behind the very elaborate space research programmes of many of the advanced nations is competition inspired by the cold war. Now, almost half a decade after the end of the cold war, I am pleased to be able to say that the experience of the past few years indicates that this simplistic and stark statement is rather far from the truth, that undeniably behind such operating factors as politics and prestige there are at work in the international community other important mechanisms that sustain efforts of many nations. These mechanisms encourage the programmes of many nations to strive for a better intellectual understanding of the universe in which we live and of the place therein that is our home, the Earth.

Despite decreasing funding and curtailment of financial support, the international scientific community has not renounced its ambitious long-term plans for exploration of nearby space and the distant universe. The nefarious effects of the scarcity of funds and of the disbanding of some scientific groups which find themselves in difficult situations are to a non-negligible extent compensated for by two factors. First, due to steady technological programmes, a number of measurements have become effectively less expensive, if counting bits of information obtained per dollar spent. Secondly, the improvement of the international political climate has helped to tear down barriers between scientific groups in various countries. As a result, new and advanced schemes of cooperation between nations can be envisaged which combine expertise in a given field with the complementary know-how of new partners to allow for qualitative jumps in technological possibilities and in the interpretation of data.

COSPAR welcomes these trends and, indeed, looks forward to a continuous crop of new data brought back both by better utilization of existing resources and by new and exciting scientific investigations in space planned for the coming decade.

Our community notes with great satisfaction that steps toward effective involvement in space research are now being undertaken by a number of quickly developing nations in South-East Asia and the Pacific area. This year's Asia-Pacific Conference on Multilateral Cooperation in Space Technology and Applications, held in January 1994 in Bangkok, and the decision adopted by participants to work toward a more permanent association of countries in matters of space activities is additional proof, if ever such a confirmation were needed, that on this eve of the twenty-first century, space activity has become a legitimate and normal concern of a substantial section of the international community.

COSPAR looks upon these new trends with great interest and expectations. We are particularly satisfied that a strong and vigorous, yet purely research-oriented, component of these new tendencies is becoming more present in our own internal development. Last November the first COSPAR Colloquium to be held in the South-East Asian region took place in Taipei. We look forward to involvement in another space science meeting of regional interest that is proposed by Iran.

COSPAR is also very much encouraged by the fact that some of the new countries that have recently emerged in Central and Eastern Europe have expressed interest in joining our organization, and we would certainly warmly welcome any such intentions manifested by the countries of the South-East Asian and Pacific regions.

The objective expressed in priority agenda item number 4, "Ways and means of maintaining outer space for peaceful purposes", has always been pursued by COSPAR, which deems this condition essential for true scientific activity. We are ready to contribute our expertise to the efforts of the international community in this quest.

Our scientists, coming from so many nations, so many geographical areas, and working on a very wide range of problems of both a highly theoretical as well as a very practical nature, are very well-placed and qualified to foresee the dangers of rash and careless actions in space, be they of a military, industrial or commercial character. Our scientists are united in their conviction and desire to work with the international community of nations to prevent blunders difficult to remedy retroactively.

Let me add a personal note as the Chairman of COSPAR's Panel on Potentially Environmentally Detrimental Activities in Space: We shall continue to keep a watchful eye on all developments in space that could potentially perturb our environment or that of our planetary neighbours.

I wish the Committee, on behalf of COSPAR, most fruitful deliberations during this session.

The meeting rose at 12.10 p.m.

United Nations

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General Assembly

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Committee on the Peaceful Uses of Outer Space

397th Meeting
Wednesday, 8 June 1994, 3 p.m.
Geneva

Chairman: Mr. Hohenfellner . . . . (Austria)

The meeting was called to order at 3.05 p.m.

Organization of work

The Chairman: This afternoon we will continue and conclude agenda item 3, "General exchange of views". Upon completion of the general debate, we will immediately begin our consideration of agenda item 4, "Ways and means of maintaining outer space for peaceful purposes". I urge all delegations wishing to speak on this item to inscribe their names on the list of speakers as soon as possible.

General exchange of views *(continued)*

Mr. Sánchez (Cuba) (*interpretation from Spanish*): Allow me to join those who have taken the floor before me to congratulate you on your election to the chairmanship of this Committee. My delegation is certain that under your experienced guidance, and with the ever-constructive participation of the Office for Outer Space Affairs and the capable and distinguished delegations present here, we shall achieve the objectives set out for this important session.

I wish also to express my delegation's satisfaction at the fact that this session of the Committee is being held in this beautiful and hospitable city. We are convinced that the professionalism and expertise which have always marked the work of this excellent United Nations Office will be of considerable help in work related to space activities.

My delegation is pleased and honoured to address this Committee at its thirty-seventh session; we continue to do so as an Observer.

For more than 10 years now, Cuba has been involved in United Nations activities for the peaceful uses of outer space, participating in this Committee and its corresponding Scientific and Technical and Legal Subcommittees. Cuba took a very active part in UNISPACE 82; in 1990, Havana was host to a regional United Nations workshop on space communications for development; and in 1992, an international seminar, "Results of a Study of the Earth by Aerospace Means", was held in Havana as well, and was organized as Cuba's contribution to the activities of International Space Year.

Cuba also took an active part in the first and second Space Conferences of the Americas, which were successfully held in Costa Rica and Chile in recent years.

In conformity with the importance attached by our Government to space activities, our country created the Cuban Commission on the Peaceful Exploration and Use of Outer Space which, since the 1980s, has been coordinating the efforts of more than 20 institutions and bodies across the nation in the development and use of space research.

Cuba is among the few third-world countries which has developed scientific equipment for space research, many types of which have already been used satisfactorily, while others have passed rigorous tests and will soon be operational.

In short, Cuba has a broad range of activities and participates in national and international space projects. Therefore, while aware of the interest expressed by other States, my Government feels able to reiterate its wish - stated over the past five years - to become a member of

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this Committee. Our presence would contribute to broadening cooperation for better and more effective exploration and peaceful use of outer space.

My delegation fully shares the opinion of most countries that the international community has the right and the responsibility to participate in drawing up norms and regulations governing cooperation in the peaceful use of outer space for the benefit of all States. Legal norms, along with other understandings and means of cooperation, should ensure the application of the principles of sovereignty and non-interference in the affairs of States, as well as the right of all peoples to free and independent development.

It is in that light that we have been attentively following the current work and the progress achieved with respect to the set of Principles Relevant to the Use of Nuclear Power Sources in Outer Space. As well as being a developing country, Cuba is in a particular geographical position, which is why we are especially concerned about the consequences of the uncontrolled re-entry of objects with nuclear power sources on board, and about possible failures during launching or the early stages of flight.

My delegation believes that the question of the definition and delimitation of outer space should be resolved in accordance with the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies. We continue to view the geostationary orbit as a limited natural resource over which no State or group of States can exercise sovereignty to the detriment of others.

We think it extremely important that the spin-off benefits of space technology should promote increased non-discriminatory international cooperation, with greater account being taken of the needs and interests of developing countries.

We were pleased by the work of the Scientific and Legal Subcommittee during its thirty-first and thirty-third sessions; its recommendations will prove extremely useful for the work of the Committee.

With respect to the holding of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, my delegation once again states its commitment to cooperate as best it can to ensure that it is successfully held in a developing country. We believe that the conference should devote special attention to, among other items of paramount importance, the link between outer space, the environment and development.

I conclude by expressing my country's readiness to cooperate with United Nations work in this field and, in research related to the study of outer space and its peaceful use, to establish ties of cooperation and collaboration with all countries and organizations addressing this rich resource of mankind.

Mr. Argüello (Nicaragua) *(interpretation from Spanish)*: I wish to begin, Sir, by saying how pleased my delegation is to see you once again in the Chair for this session of the Committee on the Peaceful Uses of Outer Space. I wish also to convey our appreciation to the Director of the Office for Outer Space Affairs, Mr. Jasentuliyana.

I take the opportunity of this general exchange of views to make some brief observations from the viewpoint of an observer country. My delegation believes that developing countries, lacking advanced technology, must not be kept isolated from information and knowledge on outer space. Nor are they in a position to do without the benefits of space science and technology.

As a tropical country with an extremely fragile ecosystem, prone to frequent natural disasters, Nicaragua needs scientific and technical information relating to our country's circumstances - information that is handled through this Committee. I am thinking first and foremost of meteorology; of telecommunications as applied to remote education programmes; of the use of satellite data to study soil erosion and degradation, deforestation, climate change and changes in rainfall patterns; and other spin-off benefits of space technology.

This is a question not solely of sharing technology, but also of not becoming a victim of that technology, as recently happened in my country. It has been reported that foreign pirate vessels with satellite-guided navigation systems enter Nicaragua's Atlantic and Pacific territorial waters by night, to steal our maritime resources. That is an example not merely of not sharing technology, but of using technology to harm countries lacking it.

My delegation states Nicaragua's continued interest in the expansion of this Committee on the basis of regional balance, which would give additional countries - one of which could be Nicaragua - the opportunity to participate fully in the Committee's discussions.

My delegation supports the activities of several members of the Committee with a view to convening, as soon as possible, a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE-3), and, as the General Assembly recommended in its resolution 48/39, preferably holding it in a third-world country. This position has the support of the Group of 77 and of the Group of Latin American and Caribbean States.

My country joins others in calling for increased international cooperation in space technology. As you suggested in your opening statement, Mr. Chairman, the practical benefits of space technology and its applications must provide concrete benefits to all countries. Like the sea beyond territorial maritime shelves, outer space is the heritage of mankind, not of a small group of States.

Paradoxically, outer-space technology particularly affects the poor and the rural sectors of developing countries. Those sectors, unaware of the debates in this room and even of the existence of this Committee, have a close relationship with the skies: their sowing patterns are governed by the phases of the moon, the tides. They are the first to notice the negative consequences of environmental deterioration; they are the most vulnerable to sudden climatic changes; and they are the ones who would benefit most from the use of space monitoring as applied to agriculture.

There is no justification for denying the benefits of space activities to those sectors, especially when such technology leads to greater agricultural yields, more timely awareness of impending risks and dangers, and a greater awareness of our common responsibility towards our planet.

Mr. Velázquez (Peru) *(interpretation from Spanish)*: Allow me first of all, Mr. Chairman, to join those who have spoken before me in expressing congratulations to you, and I extend those congratulations to the other members of the Bureau.

I also thank you for giving me this opportunity to address the members of the Committee, since I wish to apprise them of the great importance my Government attaches to the subject of Peru's joining COPUOS.

As this is the first session of the Committee on the Peaceful Uses of Outer Space to be held since its relocation in Vienna, preceded by the sessions of its two Subcommittees in which Peru participated as an observer, I would have been very pleased to review the activities and actions undertaken by my country in the field of the exploration and use of outer space for peaceful purposes. However, I shall refer only briefly to some of Peru's activities in this field.

Peru is doing important work in the area of space activities, particularly through the National Commission for Aerospace Research and Development (CONIDA), and the Peru Geophysical Institute. In its 20 years of existence, CONIDA has achieved international recognition for its work in promoting remote sensing technology through its training programmes.

Peru has also been using geostationary satellites as a means of retransmission to ensure national coverage. It uses modern techniques for television broadcasting, telephone communications and data transmission. Since the 1980s, Peru has also been conducting experiments on education via satellite.

We also wish to recall the activities my country has undertaken in the use of unmanned scientific satellites, particularly in the fields of meteorology, navigation, geodesy and spatial photography.

Further, in the field of outer space study, since the 1960s we have been carrying out space research with ground-based instruments. Peru's Jicamarca radio observatory, which has been developing techniques for the study of inner space through radar and, has made important contributions in this area. The Ancón and Huancayo observatories have also made significant contributions in ionospheric physics, using satellite radio-receivers and studying the effects of the ionosphere and its irregularities in the propagation of the signals they emit (scintillations and Faraday rotation). The Punto Lobos base installations 60 km. south of Lima and near the magnetic equator have made it possible to carry out international cooperation projects with the National Aeronautics and Space Administration (NASA), the Max Planck Institute and North American universities, as was done in the Antarqui, Equion, Castor, 6687 and Condor Projects.

The activities carried out by the various specialized institutions and universities, as well as the recent establishment of the National Centre for Training in Space Science and Technology, will make it possible to continue strengthening national programmes for research, development and use of space technologies.

I should also like to mention that my country's active participation in Latin America and the Caribbean in matters related to outer space has made it possible for Peru to be selected as host of the Third Regional Workshop and Seminar on the use of satellite data on natural resources, which is to be held in Lima next October.

Peru is firmly convinced that progress of this kind in space technology should be reflected in an active representation by country in the specialized international bodies dealing with this important subject. That is why we hope that Peru's request to join the Committee on the Peaceful Uses of Outer Space will be favourably received.

Mr. Boutos (Greece): Since this is the first time I have taken the floor, I should like to congratulate you, Mr. Chairman, for guiding the deliberations of this Committee in your usual outstanding manner.

I wish I did not have to speak at this time, but the statement of the representative of France this morning prompts me to clarify certain points. In his statement the French representative asked which countries were the new candidates for membership of COPUOS and, answering his own question, said that he saw only Spain and the Republic of Korea, both of which had his support.

It is in this context that I should like to remind the French representative that Spain, together with Portugal, Turkey and Greece, are all full members of COPUOS and, following a gentleman's agreement in 1980, alternate in pairs in the two seats available to them. Their full membership has been legally and conclusively established, as has their request to become permanent members of this Committee when the next enlargement of COPUOS occurs. Their requests have equal force and, indeed, the Chairman of the Committee and the Secretariat, both in New York and in Vienna, have taken full cognizance of the fact and are acting accordingly.

Not only were we therefore very unpleasantly surprised to hear that the speaker, who represents a fellow member of the European Union, mention only Spain's candidature among the four rotating countries, but also that he considers Spain's request to be on the same basis as the request of the Republic of Korea for new membership.

I should like to add that my country's request for a permanent seat has on numerous occasions been submitted in written form both to the President of the General Assembly as well as to the Chairmen of the Group of Western European and Other States, and has also been incorporated in the records of this Committee.

Furthermore, the Chairman of COPUOS has expressly stated that there is no need for the submission of additional documents to this effect.

In closing I should like to reiterate my country's position on this matter - which is that we cannot accept any move towards enlargement that does not restore the permanent membership of all four countries at the same time, a position which is shared by our partners in COPUOS that are in the same situation as Greece.

The Chairman: May I remind representatives that at this stage we are conducting the general debate. The question of enlargement will be taken up under agenda item 9, "Other matters". This does not in any way, of course, interfere with the right of representatives to make statements. But I should like to recall at this stage, before we encounter a possible specification of the general debate - which I would not accept because I am strictly abiding by the logic that we should keep the agenda items as they are - that we will come to the question of enlargement under agenda item 9.

Mr. Sölendil (Turkey): I wished to make a clarification on the same issue as my Greek colleague. Since the Chairman has stated that this matter will be discussed under agenda item 9 - which was our intention to do so from the outset - I shall refrain from addressing it at this stage.

The Chairman: The representative of Turkey has set an example in discipline, and I commend him. Under "Other matters", we shall take up, *inter alia*, matters of enlargement and the future organization of work. I have, of course, listened attentively to all statements made so far, but I would urge members to adhere to the principle that we should follow the agenda items.

I now call on the representative of the International Astronautical Federation (IAF).

Mr. Ortner: On behalf of the President of the International Astronautical Federation (IAF), Alvaro Azcarraga, I am pleased and honoured to present a short summary of the activities of the IAF, concentrating in particular on the question of cooperation with developing countries.

At present, the IAF comprises 125 member societies from 45 nations. It can be considered as the worldwide umbrella society for space agencies, space societies and industrial companies active in space. Great efforts are being made to further invite institutions from developing countries to become members of the Federation.

After the most successful Congress of the IAF in Graz, Austria, last October, the next Congress will be held in Jerusalem, Israel, from 9 to 14 October this year. As in past years, a special workshop will be devoted to the needs of developing countries on the theme "Benefits of Space Technology for the Developing World - from Economic Growth to Environmental Protection". This workshop will be co-sponsored by the United Nations, the European Space Agency and the Commission of the European Communities. The IAF Committee for Liaison with International Organizations and Developing Nations, under the chairmanship of Professor U. R. Rao, is the driving force behind IAF's activities in promoting cooperation between industrialized and developing countries.

The IAF is working closely together with COSPAR in preparing special symposia, which are held in conjunction with the sessions of the Scientific and Technical Subcommittee. The recent symposium on "Space Applications for Disaster Prevention, Warning, Mitigation and Relief" proved very successful. For next year's session, a symposium on "Application of Space Technology for education" is being prepared for 21 and 22 February 1995. Since the move of the Office for Outer Space Affairs to Vienna, the Austrian Space Agency is coordinating these events.

As part of its efforts to promote the study and development of space law, the IAF created the International Institute of Space Law (IISL) in 1960. Since then, the IISL, now presided over by our Secretary, the head of the Office for Outer Space Affairs, Nandasiri Jasentuliyana, has maintained close ties with the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space. Its efforts in this area include the annual organization of a symposium on a particular aspect of space law during the session of the Legal Subcommittee. The theme of this year's session, organized in cooperation with the European Centre for Space Law, was "Legal Questions Regarding Commercial Activities in Space". We are pleased that this session was useful to all delegations.

In conjunction with the IAF Congress, the IISL holds annual colloquiums on the Law of Outer Space. The 1994 Colloquium will focus on new legal developments in satellite communications, definitional issues in space law, liability in commercial space activities and other legal matters related to the peaceful uses of outer space. The 1995 Colloquium will be held in Oslo, Norway, during the forty-sixth IAF Congress.

The IISL also has many working groups, through which it carries out important work in the field of space law. The work of one such group which is of particular interest to this Committee is that of the Working Group on the Definitional Issues in Space Law, under the chairmanship of Professor Gorove, who is present at this session. It has begun consideration and clarification of certain basic legal concepts and terms which appear in the space agreements drafted by this Committee.

Finally, let me point out that the IAF will be pleased to continue preparing the annual reports on highlights in space technology for the United Nations and providing all necessary support to this Committee.

The Chairman: I should like to express my gratitude to the IAF and COSPAR, both of which have helped us greatly in organizing the symposiums of the Scientific and Technical Subcommittee, and which will continue doing so in the future.

This brings us to the conclusion of our consideration of agenda item 3, "General exchange of views". I should like to commend the Committee on the fact that 40 countries participated this year, which is better than last year in New York, when 35 countries made statements under this agenda item. I say this because it shows that representatives followed my recommendation to use the conference facilities as much as possible under the specific agenda items.

Ways and means of maintaining outer space for peaceful purposes

Mr. Zaman (Pakistan): The question of the militarization of outer space was first included on the Committee's agenda for its consideration at its twenty-seventh session, in June 1984. Thereafter, starting with the twenty-eighth session of the Committee, in June 1985, the title of the item was changed to "Ways and means of maintaining outer space for peaceful purposes". We have thus been discussing this agenda item, to try to find means to keep outer space for peaceful purposes only, for 11 years. It is interesting to note that in that time considerable progress has been registered on almost all the items on the agenda of the Committee as well as of its two

Subcommittees, but no progress whatsoever has been made in our Committee on this agenda item. The various delegations reaffirm their positions year after year, resulting in an inconclusive debate.

There is no denying the fact that it is in this Committee that all matters pertaining to the uses of outer space are discussed, negotiated and formulated into treaties. In view of the seriousness of the "weaponization" of outer space, other United Nations Committees, such as the Special Political Committee and the Conference on Disarmament, also deal with this subject. But that does not undermine the work of this Committee. As we all know, several space treaties have been formulated so far under United Nations auspices, including the 1967 outer space treaty; the rescue Agreement of 1968; the liability Convention of 1972; the registration Convention, of 1976; the Moon Agreement of 1979. Subsequently, a number of drafts of new treaties, as well as several amendments to the outer space Treaty and the registration Convention, in the form of additional Articles or Protocols, have been proposed and discussed at the Conference on Disarmament in the past decade or so.

In view of the fact that there is increasing interest in achieving greater transparency in space activities, as a constructive step towards the prevention of an arms race in outer space, a number of new measures have been advanced to foster the dissemination of knowledge on the various technical problems and to prepare the political basis for proper negotiations. These include the conducting of a study on specific aspects related to the application of different confidence-building measures in outer space, finalized last year by a study group of Government experts.

Representatives will also recall that a number of proposals have been submitted to the United Nations General Assembly, to this Committee and to the Conference on Disarmament about possible institutional arrangements for monitoring and verifying any agreement on outer space. All these efforts speak for themselves about humankind's eagerness to avoid the "weaponization" of outer space, because this is not a problem only for a State or States; it is a problem for all humankind. Let us face the various issues involved in this respect boldly and, bearing in mind the optimum use of the precious time available to our Committee, try to make substantial progress in the matter. For that purpose, we will have to evolve a strategy for formulating some terms of reference to initiate a constructive discussion on the various issues involved. This is perhaps the only way, in my delegation's view, and one which, hopefully, will lead us to an agreeable solution to the various problems.

Mr. Muñoz Ledo (Mexico) (*interpretation from Spanish*): The end of the cold war and the suspension of the Strategic Defense Initiative, commonly known as Star Wars, has created auspicious conditions for the evolution of negotiations among the major space powers to reach a rapid agreement on the prevention of an arms race in outer space. In this context, we should recall that the General Assembly, faced with the little progress that has been made, appealed, through resolution 48/74, to the Russian Federation and the United States to resume negotiations for that purpose.

The Mexican delegation believes that the continued discussion of this priority subject in the Committee has not produced significant progress in preserving outer space for peaceful purposes. This situation is not in keeping with the spirit of General Assembly resolution 48/39, which urges all States, in particular those with major space capabilities, to contribute actively to the goal of preventing an arms race in outer space.

The Secretary-General of the United Nations has submitted a report on international cooperation in space activities for enhancing security in the post-cold-war era, in which he proposes to broaden international cooperation in the area by revitalizing existing mechanisms and by producing new cooperation mechanisms as well. Among the proposals to establish innovative approaches for cooperation in space and security, the Mexican delegation attaches particular importance to confidence-building measures and improvement of access to space technology, both of which fall within this Committee's area of competence.

The Mexican delegation believes that implementation of the Secretary-General's recommendations in this respect will necessarily require greater coordination of activities among the various bodies of the United Nations. One essential step is to promote a communication and coordination link between the work of the Committee, designed to ensure the peaceful use of outer space, and the activities of the Conference on Disarmament, designed to prevent an arms race.

My delegation would recall the fact that the need for coordination between the Committee and what was then the Disarmament Commission was recognized by the General Assembly in paragraph 15 of its resolution 38/80. However, this aspiration has not been translated into a reality over the last 10 years, which can be explained by the context of the cold war. In the current situation, which appears to be one of greater understanding, the revitalization and coordination of work by the different bodies of the United Nations would be a natural response to the need to increase transparency and strengthen cooperation within the international community.

In the study by the Group of Governmental Experts to Undertake a Study on the Application of Confidence-Building in Outer Space, contained in document A/48/305 of 15 October 1993, different areas of cooperation are identified, to which my delegation would like to draw the Committee's attention. In paragraph 329 of that report, it is noted that, given the dual-use nature of some space technologies and the international character of the relevant issues discussed in the context of the prevention of an arms race in outer space and of the peaceful uses of outer space, the possibility of establishing working contacts between the Conference on Disarmament and COPUOS should be explored and appropriate actions considered by the General Assembly to encourage such contacts.

Also, in paragraph 322, the study recommends that the Legal Subcommittee, within its mandate concerning the international legal regime governing activities in outer space, continue to keep under review the Convention on the Registration of Objects Launched into Outer Space with respect to staying abreast of technological development and the possible need for ensuring greater transparency and predictability in space operations.

In parallel, the discussions held and the proposals made recently in the Ad Hoc Committee on the Prevention of the Arms Race in Outer Space relating to confidence-building measures in space activities reflect, from that Committee's point of view, the need to establish working relationships with this Committee. Indeed, at its 15 March meeting, that Committee considered a proposal which identified the subjects of space debris and nuclear power sources in outer space as areas where the work of the two bodies coincides and which deserve greater cooperation.

Given these points, the Mexican delegation would like to state that this Committee, through its scientific, technical and legal work, has an important role to play with a view to ensuring that space is maintained for peaceful purposes, and could be in a position to make its contribution to the implementation of the Secretary-General's proposals.

Mr. Zaitsev (Russian Federation) (*interpretation from Russian*): It has been quite a while now since the General Assembly entrusted this Committee with the important and noble task of maintaining outer space for peaceful purposes. In so doing, the Assembly contemplated that the Committee would provide the framework for the elaboration of agreements embodying key principles relating to the use of outer space.

Moreover, criteria were established to govern the political, legal and moral aspects of activities carried out in space. Without exaggeration, these activities were of the utmost importance.

Obviously, to assign essentially new substantive goals to the Committee is no easy matter. Because of the widely differing points of view represented here, constructive ideas often get lost in the shuffle. What is more, in paying homage to the formal aspect of our work, we are imperceptibly acquiring the habit of avoiding substantive issues. Problems are not being resolved, and specific ideas and proposals are left hanging in the air.

It is no easy task to merge all points of view, but we can certainly agree on a position bringing together all the ideas and proposals. It would be logical to concentrate our efforts on individual questions that are ripe for solution, even if the solutions are not comprehensive: we can always proceed from the specific to the general.

In our view, the success of the Committee's work could be enhanced by improved contacts with the Geneva Conference on Disarmament. We are, of course, aware that some of our colleagues are antagonistic to the idea of establishing direct relations between the outer space Committee and the Conference on Disarmament. But we still feel that the Committee can feel secure that there could be constructive measures in this regard. It is vital that there be at least occasional exchanges of information with the Conference's ad hoc committee on matters of mutual interest. The advantages of such channels of communications are obvious: they would enable us to lend greater clarity to issues; we could achieve generally acceptable solutions; and our work would become more productive.

I would note that the Conference's ad hoc committee is itself seeking guidance and for rationalization of its activities. Yet the most promising aspect of its work involves the strengthening of measures to enhance confidence and predictability in space activities. We can relate this to the greater transparency of pre-launch activities and to norms governing pre-orbit groupings, space systems and units, which function as astronautical "rules of the road".

Given the spirit of the times, the delegation of the Russian Federation wants our colleagues to have the opportunity to consider this matter; we should ask the Chairman to take what he views as the most effective measures to establish a useful relationship with the Conference. Recent discussions in the Conference on Disarmament have included the subjects of space debris and on-board nuclear power sources, both of which fall within the purview both of this Committee and of the Conference.

We hope, Mr. Chairman, that you and our other colleagues - many of them stating their active participation in discussions on ways and means of maintaining outer space for peaceful purposes - will understand that the somewhat severe tone of my delegation's statements indicates our sincere interest in the Committee's success. We hope too that our constructive criticism will be of some help in finding a new path for our work.

Mr. El Ghernougui (Morocco) *(interpretation from Arabic):* The world community is now in a new era characterized by new global concerns. In the light of this situation, one feels more optimistic and hopes for a better future, and for a new, improved spirit that will expand and strengthen international cooperation in the peaceful uses of outer space and make possible completely transparent scientific and technological progress in that field. We are optimistic that there will be greater trust and increased cooperation among States in the use of outer space, with full regard for the safety and security of space travelers.

The question of maintaining space for peaceful purposes is inextricably linked to that of the use of space for non-peaceful purposes. Hence, transparency must be maintained. There must be good will, and safeguards for our common interest in peaceful uses of outer space and for the ever-growing needs of developing countries. Those countries must be given the assistance they need. Ways and means of promoting scientific and technical research on the peaceful uses of outer space must be enhanced.

We are aware of the Committee's important role in these areas, and of the role of the Conference on Disarmament with respect to monitoring and preventing an arms race in space. My delegation considers, therefore, that the Committee should positively and actively work with the Conference on Disarmament. The Committee should coordinate its activities with those of other bodies working in the field of arms limitation, without losing its special characteristics, which differ from those of any other United Nations body.

Moreover, Morocco considers that international outer space law must be revised. There must be international conventions to reflect our achievements to date in the area of science and technology relating to the peaceful uses of outer space. These should be based on the principle of respect for the sovereignty of States; they should be transparent; and they should enhance public awareness and confidence in all countries.

The delegation of Morocco feels that we cannot deal with this matter successfully unless we pay particular attention to questions of the safety and security of the outer space environment and that of human beings in that environment, which inevitably has an impact on the question of the maintenance of outer space for peaceful purposes. We must ensure that space is not militarized, and that it be protected from any nuclear accident or other event. We know that such accidents always have the same result: enormously increased danger, and danger for life on Earth. We must protect outer space from this; we must avoid collisions between satellites and nuclear power sources or space debris. This subject is becoming increasingly vital; the danger is growing. The international community has to be extremely cautious.

This new era in history is characterized by international cooperation, in contrast to the era of tension that we have just lived through. The delegation of Morocco feels that we are very close to reaping the benefits of the efforts that have been made in the past. We therefore believe that Member States - more specifically, States with the necessary technology for the use of outer space for peaceful purposes - should accord more importance to activities relating to the report of the Secretary-General on national and international research on ways to strengthen the safety and security of satellites equipped with nuclear power sources. This would enable us all to follow more closely any developments in this field and to benefit from the related scientific and technical progress.

We have to make more effort. We must continue to study the problems that may result from collisions between nuclear power sources and space debris, and we also need to study their nuclear and radiation implications. The Committee should be kept informed by Member States of their wishes in this respect.

We therefore invite the Committee once again to set up a working group to study in depth all matters relating to the use of nuclear power sources in space, as well as the dangers that would result from the collisions I mentioned.

Mr. Chandrasekhar (India): Our delegation would like to make a very brief statement on this agenda item, which has been under consideration by our Committee for several years now. Progress, however, has been extremely slow. The subject is of fundamental importance to the Committee. Hence, it is necessary to explore the possibilities of taking even small steps towards progress.

In the past, there have been a few areas in which the Committee was able to reach a common understanding on this subject. One of these relates to the strengthening of international cooperation in the exploration and peaceful uses of outer space. The other relates to reinforcing the Committee's role, including the further development of international space law. In the view of our delegation, several steps could be taken to broaden the common ground on which agreement has been reached in the Committee.

The Committee, while encouraging the use of a variety of means evolved over time to pursue international cooperation in bilateral, multilateral and other forms, could endeavour to strengthen those means in areas where there are gaps, particularly those involving common concerns of all mankind. They could include, to mention only a few such areas, concrete initiatives in space applications contributing to the protection of the earth's environment, natural disaster management and the eradication of illiteracy.

Appropriate international initiatives involving the use of space technology and including the widest possible participation of States could be studied, promoted and encouraged by the Committee. Also, the kind of voluntary cooperation which was orchestrated during the International Space Year could be enhanced and promoted through the Committee's efforts. Such measures for broadening and deepening international cooperation through international and regional programmes should be actively promoted and pursued by the Committee in an action-oriented manner, with time limits.

Central to the theme of maintaining outer space for peaceful purposes is the need to preserve the outer space environment itself, so that access to it is assured for countries which have yet to make use of outer space for peaceful purposes and for the benefit of future generations. Crowding in certain parts of outer space by active spacecraft and debris has given rise to considerable concern. Hence, appropriate measures, including increased international cooperation for monitoring and tackling such problems, as well as the further development of legal norms, are important from the point of view of maintaining outer space for peaceful purposes.

The Committee has been responsible for developing all major international agreements in the field of the exploration and peaceful uses of outer space in the past. It is pertinent to elicit the widest possible adhesion to these treaties, and our Committee should continue to pursue appropriate measures to promote additional membership.

In the context of maintaining outer space for peaceful purposes, our delegation has always recognized that removing impediments to the peaceful uses of outer space is also important. There have been suggestions in the past in the Committee that it should play a complementary role to the Conference on Disarmament. Taking into account the work of the Committee in developing international law related to the peaceful uses of outer space, appropriate activities pertaining to transparency and confidence-building measures could be examined by the Committee.

Finally, we hope that the Committee will make further rapid progress on this matter, which has been mandated as a priority item by the General Assembly.

Organization of work

The Chairman: Tomorrow at 10 a.m. sharp we shall continue our discussion of agenda item 4 and begin our consideration of agenda item 5, "Report of the Scientific and Technical Subcommittee on the work of its thirty-first session." In accordance with past practice, we will consider this item jointly with agenda item 7, "Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space". Delegations wishing to speak on either of those items may do so in the time allotted to their consideration. I would urge all delegations wishing to speak on those items to inscribe their names on the list of speakers as soon as possible.

As was discussed at our opening meeting, and in accordance with the requests of several delegations, there will be an informal meeting of the Committee on Friday afternoon in the form of open-ended consultations to discuss matters related to the working methods of the Committee and its subsidiary bodies, specifically the Legal Subcommittee, and including also the proposals made by several delegations.

The meeting rose at 4.10 p.m.

United Nations

A/AC.105/PV.398

General Assembly

Official Records

Committee on the Peaceful Uses of Outer Space

398th Meeting
Thursday, 9 June 1994, 10 a.m.
Geneva

Chairman: Mr. Hohenfellner . . . . (Austria)

The meeting was called to order at 10.10 a.m.

Organization of work

The Chairman: When we exhaust the speakers' list on agenda item 4, we will begin our consideration of agenda item 5, "Report of the Scientific and Technical Subcommittee", and agenda item 7, "Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space". Following the past practice of the Committee, we will consider these items jointly. The speakers' list for item 4 will remain open, so that delegations wishing to speak on this item may do so at this afternoon's meeting. I urge all delegations wishing to speak on any of these agenda items - 4, 5 or 7 - to inscribe their names on the lists of speakers as soon as possible.

I would also remind representatives that tomorrow afternoon, we will hold - as I announced yesterday - an informal meeting of the Committee to discuss matters related to its working methods and those of its subsidiary bodies, as requested by several delegations.

Ways and means of maintaining outer space for peaceful purposes *(continued)*

Mr. Pesci-Bourel (Argentina) *(interpretation from Spanish)*: As we stated in our initial statement, the Government of Argentina is firmly committed to the exclusively peaceful use of outer space, which is the only way to ensure that outer space is used for civilian ends only and for the benefit and progress of all mankind. That is why my country has employed every means possible to ensure that Argentine space activities are geared and committed to that end.

Not only is our national space programme wholly under the aegis of the Commission on Space Activities, a purely civilian body, but our Government has also dismantled all missile-related projects throughout the country. In addition, we are recycling the Falda del Carmen facilities in order to set up a centre for space activities.

The Republic of Argentina also adheres to the guidelines for controlling the export of missile technologies and participates actively in the group of countries that take a similar stand. Accordingly, the National Commission on Sensitive Exports strictly controls all Argentine exports in this field, including space technologies, to ensure that their end use is not military.

We firmly support the work of the Conference on Disarmament in Geneva relating to the prevention of an arms race in space and hope that it will soon yield positive results.

Along the same lines, the Government of Argentina has adhered to the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space adopted by the United Nations General Assembly, and ratified the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

We hope that the new perspectives emerging on the international scene following the end of the cold war will

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allow for the universal acceptance of these principles and reserve outer space for purely civilian and peaceful purposes.

In conclusion, we would reiterate the need to ensure that the best means to conserve outer space for peaceful purposes is through international cooperation, which promotes confidence between States and strengthens a climate of greater transparency in space activities.

Mr. Jahedi (Islamic Republic of Iran): Recent developments and subsequent changes in the international environment have provided new opportunities for utilizing space technology to improve international peace and stability. According to the fundamental principles of the Committee on the Peaceful Uses of Outer Space, outer space is the common heritage of mankind and should be explored and utilized for exclusively peaceful purposes.

My delegation therefore believes that the benefits of the space programme should be shared by a great number of States and nations, particularly developing countries. The rapid advances in space technology over the past decade and the widespread use of this technology for essential economic and social services all suggest that the international community should seize the opportunity to ensure that the space sciences are used to promote security and stability for the benefit of all countries.

As we enter a new era of international cooperation, my delegation attaches great importance to the use of space technology for the well-being of mankind in the spheres of communications, environmental issues and disaster prevention. In this regard, cooperation among countries is key to the peaceful uses of outer space and should be strengthened by international organizations.

Technical cooperation among Member States and assisting developing countries in the use of space technology for development requires the active involvement of the United Nations. In our view, free access to space data, transfer of technology and the strengthening of cooperation are among the issues on which developed and developing countries should work together to overcome their differences.

In order to keep space free of an arms race, my delegation would welcome any agreement governing space activities on the prevention of an arms race in outer space. There is an urgent need to conclude an international agreement on the prevention of an arms race in outer space with a view to enforcing the existing legal regime, while taking up confidence-building measures in the interim. The demilitarization of outer space should ensure the safety and security of the Earth.

In this context, my delegation suggests the establishment of cooperation between this Committee and the Conference on Disarmament within the framework of the Committee's work and its agenda items.

Mr. Hodgkins (United States of America): My delegation would like to comment briefly on the topic of ways and means of maintaining outer space for peaceful purposes. Previous speakers have sounded a note of optimism for the future work of the Committee. We share that optimism and firmly believe that the present conditions are such that we can build a solid foundation for enhancing international cooperation in the exploration of outer space.

Changes in the world political scene continue to raise challenges to and opportunities for broadening and deepening cooperation in outer space. We must position ourselves to take full advantage of these opportunities and avoid those extraneous issues, such as disarmament, which have created points of contention in this Committee.

Indeed, when the Committee was established over three decades ago, there was a clear separation between disarmament, which would be taken up in other United Nations forums, and international cooperation in the peaceful uses of outer space, which would be addressed in COPUOS. The wisdom of that decision is apparent when we look at the accomplishments of this Committee in increasing international understanding of the potential uses of outer space for science and engineering, communications, transportation, meteorology, environmental monitoring and medicine.

Another promising sign for the future is the potential for regional cooperation. My Government participated actively in the first and second Space Conferences of the Americas. These Conferences, hosted by the Government of Costa Rica in 1990 and the Government of Chile in 1993, brought together government policy-makers and space experts to explore the prospects for regional cooperation. We were greatly impressed with the results and pleased that this Committee was able to lend its support and encouragement. The Conferences were certainly an important advance in regional cooperation, a priority that COPUOS has been advocating for over a decade, beginning with UNISPACE-82.

There is no doubt that the utilization of space technology to solve problems on Earth must be considered in a global perspective, particularly as related to the protection of the environmental quality of the world's land, oceans and atmosphere. But regional cooperation continues to hold great promise. Perhaps we should dedicate our efforts under this agenda item to exploring how the Committee could use its resources and expertise to take full advantage of the potential for regional cooperation to meet specific regional needs. We might also consider under this item ways in which the Committee could promote greater international cooperation in the use of space systems for disaster early warning and mitigation and global search and rescue activities.

Report of the Scientific and Technical Subcommittee on the work of its thirty-first session (A/AC.105/571)

Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space

The Chairman: I call first on the United Nations Expert on Space Applications, Mr. Abiodun.

Mr. Abiodun (United Nations Expert on Space Applications): I am grateful to you, Mr. Chairman, for giving me this opportunity to address the members of this Committee on the activities of the United Nations Programme on Space Applications during the Committee's consideration of agenda items 5 and 7 at its current session. Because this Committee is meeting here for the first time since the relocation of the Office for Outer Space Affairs from New York to Vienna, I will slightly modify the usual format of my statement, taking into consideration the fact that a number of representatives may be participating in the Committee's work for the first time.

We are all well aware that the United Nations Programme on Space Applications was born out of the need to ensure, first, that the practical benefits of space science and technology are made available to the industrialized and developing countries alike, and, secondly, that all Member States are able to participate in regional and international programmes that not only affect us all, but also rely heavily on space-acquired information. It is not possible to summarize or even identify all these benefits in a brief statement such as this. However, I will address a few of them, including some of the global programmes.

The usefulness and impact of space exploration on human activities here on Earth were first demonstrated through satellite communications. The technological breakthroughs and new developments in rocketry, and thus in launch vehicle capabilities and in corresponding spacecraft technologies, have resulted in the operational satellite telecommunications systems of today. The evolution of telecommunications has been assisted and accelerated by rapid developments in various technologies, including electronic antennas and microprocessors, particularly as a major tool in the collection, storage, retrieval and distribution of data. These new technologies and many more have enabled humankind to conquer the tyranny of distance and have made telecommunications a universal system and an indispensable motor of human activities.

A decade ago it was anticipated that over 245 satellites for civil communication, with increased circuit and television channel capabilities for voice and video communication and data transmission would by now be placed in the geostationary orbit. That number has been surpassed, and the number of annual global telephone calls is now close to 3 trillion. Today deregulation and competition in the telecommunications market have resulted in the introduction of new technologies and the attendant development and introduction of new products and services into the consumer market. While video telephone is knocking at the door of the consumer, video-conferencing, tele-conferencing, tele-informatics - including the exchange of information and data between banks, oil companies and multinational enterprises - remote printing of newspapers and magazines, the delivery of education programmes and health services via satellite, and global communication by electronic mail systems are now established aspects of our time. In addition, the global community has come to appreciate the important roles of telecommunications in other sectors, particularly in agriculture, transportation, electrical power, mining and oil industries, health and education, trade and commerce, and disaster and emergency services - to name just a few.

Currently, the race is on to build a future world that is wireless. To achieve this goal, private entities will, before the year 2000, place several hundred communication satellites in low Earth orbit. These developments will enable customers to receive calls anywhere in the world, except the North and South poles.

Similarly, observation of the Earth and its immediate environment from the vantage point of outer space has become routine. Today, Earth-observation satellites provide copious data that are processed, analysed and subsequently used by many countries to decide on how to

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address a variety of issues that affect their natural resources, their immediate environment and the regional and global environment. While the spatial resolution of earlier satellites such as Landsats 1 and 2 were in the 80-metre range, today 10-metre, 5-metre and even better resolution images are commercially available. Indeed, future optical-electronic sensor systems will have finer resolution. Furthermore, other sensors, such as microwave systems, are being perfected. And because of their cloud- and rain-penetrating and night-and-day monitoring capabilities, such sensors will be of great value to resource assessment, particularly in the tropical regions of the world.

The repetitive nature of the missions of Earth-observation satellites, the synoptic coverage they provide and the multi-spectral character and multi-dimensional applications of the data they acquire make the surveying of the Earth from space very attractive. Remote sensing technology is a multi-disciplinary tool whose applications include, but are not limited to, the survey of the resources of the Earth, such as surface and underground water, snow cover, soils, forests, crops, coastal and marine environment and resources, geological and mineral exploration, environmental monitoring and related problems. Data of the Earth acquired from space can also be used in cartography and in the preparation of maps which can subsequently be used in the planning and layout of agricultural fields, roads, and pipelines, impact assessment of planned projects, disaster assessment, demographic survey and the monitoring of drug-related plants. In comparison with the acquisition of data by conventional techniques for these purposes, observation of the Earth from space is cheaper, faster, more accurate, more reliable, and can easily be verified through repetitive - multitemporal - coverage.

As members know, meteorological satellites and their associated sensors offer mankind the tools to regularly monitor the state of the Earth's atmosphere, including its pressure, temperature, humidity, wind velocity and chemical constituents. And as we all know too, as an integral part of the planetary life-support system, the atmosphere has an overwhelming impact on most human activities, including energy development, food production, human habitat including the development of cities and the design of buildings, water-resources development, human health, public safety, transportation, construction activities and recreation. In the area of public safety, for example, hurricanes and severe storms can now be located, their directions and intensities determined and individuals warned in advance of impending catastrophes.

Observations from space have also demonstrated the versatility of the atmosphere as a transport and distribution medium, and have improved mankind's understanding of global chemical cycles as well as the impact of local and regional activities, including those attributable to natural and anthropogenic emissions. The intervention of mankind in the natural self-regulating processes within the atmosphere is creating a major disequilibrium in this fragile medium and is producing climatic changes that may threaten the continuing habitability of planet Earth. Thus, for our own safety on planet Earth, it is imperative that we have a full and complete understanding of the state of the atmosphere at all times and in all localities.

But in spite of today's technological advances accidents, unfortunately, are integral parts of human existence. Searching for and rescuing the victims of accidents or those in distress is now the preoccupation of the Space System for Search for Distressed Vessels-Search and Rescue Satellite-Aided Tracking (COSPAS/SARSAT), the organization that runs the COSPAS/SARSAT system of six search and rescue satellites in low Earth orbit. To date, the system has installed 635,000 distress beacons globally, a number that is expected to exceed 720,000 by the year 2000. From September 1982 to the end of 1993, the COSPAS/SARSAT system rescued 3,470 persons in 1,217 search and rescue missions globally. However, many countries have still to take advantage of this system.

Similarly, geopositioning - the technology of knowing where you are at any time on Earth or in space - is now a reality, made possible by NAVSTAR of the United States and GLONASS of Russia through a constellation of global positioning satellites. These satellites are being used in a variety of human activities, but specifically for stationary or mobile position fixing in military and civilian operations. Beneficiaries in the latter case include merchant ships on the high seas, fishing ships, the trucking industry, all passenger vehicles, airport control towers guiding aircraft landings, cartographic and geodetic surveys and even pedestrians.

As members know and as we have heard in the past few days, future space systems will vary in shape, size and mission. More nations and entities will own, launch and operate their own satellites for a variety of purposes, and there will be a wide array of launch vehicles to choose from. Today, the list of space-capable countries continues to grow, with many more achieving launch capabilities. International cooperation in space is being manifested through several collaborative arrangements. The most prominent of these is the joint effort by Canada, the

European Space Agency (ESA), Japan, Russia and the United States, together or in groups, to build the International Space Station - the platform that will make space industrialization within the microgravity environment of outer space a reality in the first decade of the twenty-first century. It is now believed that high-value materials such as precision latex microspheres, electronic materials, various kinds of pharmaceutical products, optical fibres and highly specialized alloys can be produced in their purest form in the microgravity environment of outer space.

Space industrialization also holds promise for the production of new antibiotics, antibodies and other treatments for cancer, malaria and other diseases, including the growth of collagen fibres to be used in the repair and replacement of human connective tissue. Of major interest are the performance of various lubricants and the growth of crystals in outer space for semiconductor devices. These possibilities would certainly improve the efficiency of the production process as well as the quality of goods produced on Earth. As we all know, the attendant economic impact could be very significant and far-reaching.

Today, human venture into outer space has introduced new dimensions into many Earth-based processes and procedures. The spin-off benefits of space exploration are too many to enumerate. We are all familiar with several of them, such as the telemetry system in the heart pacemaker, cordless mechanical drilling and cutting tools, and photovoltaic cells. In addition, the limited space on board a space vehicle requires that all instruments and tools be as light and compact as possible without any loss of efficiency. These requirements have resulted in the accelerated development of integrated circuits, with each new component, such as microchips, performing several functions; such components have found subsequent applications, particularly in computer technology. The offshoots of these developments are a host of miniaturized, inexpensive and versatile consumer products. We all know them: they include televisions sets, radios, cameras, video games, microcassettes and portable receive-only television antennas.

Furthermore, the close working relationships on space programmes between Governments, universities and private and public institutions in many countries have enhanced the scientific and technical capacities of institutions of higher learning in these countries, and have expanded their contributory roles in the social and economic development of their societies. The ongoing technology developments and exploitation processes suggest that future economic systems here on Earth will be based on a redistribution of both earthbound and space-based resources and other benefits associated with space exploration and utilization.

This is the point at which we have to ask ourselves where the United Nations Programme on Space Applications fits in.

As members of the Committee are all fully aware, the United Nations has already recognized the need to assist Member States, particularly developing countries, to develop their own capacities and capabilities in space science and technology. Accomplishing the latter will enable Member States to share in the direct and indirect benefits of space exploration, some of which I have just enumerated, and equip them to effectively contribute to and participate in national, regional and international programmes, particularly in communication systems, climate research, ocean studies, and land and forest inventory. Prominent among these programmes are the internationally coordinated spacebased Mission to Planet Earth, which will chart pollution, deforestation, the greenhouse effect, ozone depletion and threats to the Earth's environment; Agenda 21, which constitutes a variety of programmes - adopted in Rio at the 1992 UNCED Conference - that could lay the foundation for a global partnership in order to ensure, through sustainable development, the future of our planet; the World Weather Watch and the World Climate Programme; and, lastly, the International Geosphere-Biosphere Programme, which strives to describe and understand the interactive physical, chemical and biological processes that regulate the Earth system.

In recognition of the above needs of its Member States, the General Assembly accepted the recommendations of UNISPACE/82. The latter directed that the mandate of the United Nations Programme on Space Applications should be expanded and should focus on the following major areas: provision of long-term fellowships; organization of training courses, workshops and conferences; provision of technical advisory services; development of indigenous capability at the local level; and provision of space information and promotion of greater cooperation in space science and technology. Annex I to this statement provides a summary of the range of activities that were undertaken under the auspices of the Programme in the 1983-92 period. The rest of my statement will focus on the operations and direction of the Programme during the period 1993 through 1995 and on how each of these mandated elements has been addressed, including a progress report on the establishment of the Centres for Space Science and Technology Education at the regional level. Details of the 1993-95 activities are contained in my current report, document A/AC.105/555, which is now before the Committee.

Within the 1993-94 period, the Programme administered 19 long-term fellowships. These included offers from the Governments of Brazil and China and the European Space Agency (ESA). These fellowship awards are for studies in remote sensing technology, with emphasis on research, applications and information systems, geodesy, photogrammetry, satellite meteorology, communications systems and space antennas propagation. Details of these fellowships, as well as the identification of the beneficiaries, are shown in paragraphs 16-19 and in annex II of my current report.

In 1993 the Programme conducted three training courses, three workshops and two regional conferences. These activities focused on, first, the applications of ERS-1 data for natural resources, renewable energy and the environment; second, remote sensing education for educators; third, space communications for development; fourth, space science and technology for sustainable development; fifth, applications of space techniques to prevent and combat natural disasters; sixth, remote sensing applications to geological sciences; seventh, basic space science; and eighth, space activities in developing countries, with particular emphasis on resources and mechanisms.

These activities were sponsored and/or hosted by the Governments of Austria, France, Germany, Greece, Indonesia, Italy, Mexico, Nepal, Nigeria and Sweden, as well as by ESA, the United Nations Department for Development Support and Management Services, Telespazio, the United States National Aeronautics and Space Administration (NASA), the Commission of European Communities, the International Centre for Theoretical Physics, in Trieste, the International Astronautical Federation, the Planetary Society, Earth Observing Satellite Company, in the United States, MacDonald Dettwiler, in Canada, and the United States Geological Survey.

The Conference, held in Bandung, Indonesia, last year noted, among other things, that space activities are very expensive and that economic realities demand regional cooperation. It also noted that there was a need for countries within the region to share their expertise and resources. The Conference identified a number of programmes that should be of primary interest to the region, including the joint establishment and operation of a telescope with a diameter greater than four meters for the benefit of the region; the initiation of a major atmospheric science programme in each country; and the development of a network which could facilitate the exchange of information among the professionals and practitioners in the field of space science and technology.

In a similar vein, at the Conference held in Dakar, Senegal, in October last year, participants called on African Governments to make adequate and long-term commitments to, and investment in, the development of skills and knowledge, as well as the needed infrastructure in Earth observation and related disciplines. The conference called upon the African Governments to develop communications access at the local level. The Conference noted that there is an urgent need for the establishment of a national multidisciplinary natural resources coordinating centre in each country, and called on all African universities and technical institutes to integrate into their education curricula, as may be appropriate, different aspects of space science and technology. Details of these activities are contained in documents A/AC.105/552, 553 and 556 through 562.

The schedule of 1994 training courses, workshops and symposiums is shown in a tabular form in annex III of my current report. These activities are being funded or co-sponsored by the Governments of Austria, China, Egypt, Israel, Italy, Peru, South Korea and Sweden, as well as by ESA, the Commission of European Communities, the United Nations Department for Development Support and Management Services, COSPAR, IAF and the Asia-Pacific Satellite Communications Conference. The Training Course in Frascati, Italy has been completed. The six-week course on Remote Sensing Education for Educators is now in progress, and will be concluded tomorrow in Stockholm, Sweden. And the plans for the Workshops on Basic Space Science, which will be held in Cairo, and on Microwave Remote Sensing, to be held in Beijing, China, are progressing satisfactorily. Details of these and other 1994 activities of the Programme are contained in annex III of my current report.

The 1995 proposals that have been recommended by the Scientific and Technical Subcommittee at its 31st session to this Committee include the courses, workshops, symposiums and conferences that are presented in paragraphs 62 (a) through (i) of my current report. In addition, the International Workshops on the Development and Design of Small Experimental Payloads and the Workshop on Spin-off Benefits of Space Technology: Challenges and Opportunities, which had been planned for

1994, have now been rescheduled for 1995, and will be hosted and co-sponsored by the Governments of Spain and the United States.

The Programme continues to provide technical advisory services to a number of African Member States through a cooperation arrangement with ESA. Within this United Nations/ESA arrangement, ESA makes available historical and current data, in the form of hard copy prints, films and computer tapes, acquired by different satellites for applications in a variety of projects in Guinea, Morocco, Nigeria and Tunisia.

In order to make the Cotopaxi ground receiving station viable for all countries that are within its coverage area, and at the invitation of the Government of Ecuador, the Programme concluded a mission to the Andean subregion last year. The report of the mission was subsequently submitted to the Governments of the four countries that were visited by the mission - Colombia, Ecuador, Peru and Venezuela - as well as to the Junta del Acuerdo de Cartagena (JUNAC), the Corporación Andina de Fomento (CAF) and the Caribbean Community (CARICOM) for their consideration. On the basis of that submission, the CAF recently approved a technical cooperation fund of $200,000 to finance the feasibility study and other substantive actions necessary for the establishment of the Multi-Andean Enterprise (MAE) within which the Cotopaxi station will operate.

The Programme on Space Applications is providing support to and serving on the Technical Advisory Committee of the *pro tempore* secretariat created at the conclusion of the second Space Conference of the Americas, held at Santiago, Chile, last year. This secretariat is following up and providing continuity to the outcome of the Conference.

The Programme is also assisting the Asia-Pacific Satellite Communication Conference to organize the Asia-Pacific Workshop on Satellite Communications for Development to be held in November this year at Seoul.

The *Directory on Education, Training, Research and Fellowship Opportunities in Space Science and Technology and its Applications* was updated and reissued in 1993 as document A/AC.105/548. The 1993 edition of *Seminars of the United Nations Programme on Space Applications*, the fourth in the series of selected papers from the activities of the Programme, was issued as document A/AC.105/568.

In our efforts to promote greater cooperation in space science and technology in the developing countries, we have undertaken a number of activities, many of which I have mentioned. To recapitulate, they include the establishment of the Asia-Pacific Satellite Communications Conference, the planned feasibility study for the Cotopaxi station and other multi-Andean enterprises, our participation in the secretariat of the Latin American space conference, and the support we are receiving from the Special Unit for Technical Cooperation among Developing Countries of the United Nations Development Programme (UNDP) in New York. All of this is making our work in terms of cooperation very feasible.

The association of the Programme with many national entities, intergovernmental organizations such as the European Space Agency, CEC, INTELSAT, EUMETSAT, COMSAT, INMARSAT, United Nations agencies such as the International Telecommunication Union (ITU), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), and with a number of non-governmental organizations such as the Committee on Space Research, the International Astronautical Federation, the International Society for Photogrammetry and Remote Sensing and The Planetary Society, is advancing greater cooperation between industrialized and developing countries as well as among developing countries. It is our belief that the initiative of the United Nations to establish centres for space science and technology education will reinforce all these efforts.

In the past few years, the Programme has incorporated youth elements into its activities, beginning with the essay contest we organized during the International Space Year. Last year, in Bandung, Indonesia, and Dakar, Senegal, a large number of high-school students responded to our invitation to participate in the youth forums that were organized in both cases. We are currently engaged with entities that operate youth programmes with a view to developing a concrete programme that can captivate the energy and enthusiasm of the youth of the world.

As members are aware, with the support and recommendation of this Committee and its Scientific and Technical Subcommittee, the Fifth Committee at its 1993 session approved an additional budget allocation of $90,000 for the 1994-95 biennium. I wish to take this opportunity to express the gratitude of the United Nations to all members for that initiative, which will strengthen the

Programme's ability to carry out its mandated activities for the benefit of Member States.

None the less, we all know there are many budgetary limitations. The Programme cannot carry out its mandated and other activities without additional resources beyond those allocated through the regular budget of the United Nations. The Programme has received a variety of voluntary contributions in support of its 1993-94 activities. These are summarized in paragraph 68 of my current report, and include cash contributions as well as: the defraying of local costs of long-term fellowships; co-sponsorship of training courses and workshops organized by the Programme; sponsorship of experts to serve as lecturers in the activities of the Programme; and funding of experts to participate in the evaluation missions in respect of the centres for space science and technology education.

Specifically, the Programme received support from the following Member States and international and regional organizations and entities: Austria, Australia, Brazil, Canada, China, France, Germany, Greece, Indonesia, Italy, Mexico, Nepal, Nigeria, Pakistan, Spain, Sweden and the United States of America, as well as FAO, ITU, UNESCO, WMO, ESA, CEC, EUTELSAT, INMARSAT, INTELSAT, COMSAT, TONGASAT, the Interplanetary Society, EOSAT, MacDonald Dettwiler and Telespazio.

I am very pleased to report that the Governments of Austria and Pakistan and the European Space Agency made voluntary cash contributions to the tune, respectively, of $20,000, $15,000 and $85,000 in support of the 1993 activities of the Programme. EOSAT contributed $10,000, MacDonald Dettwiler contributed Can$ 5,000 and Telespazio contributed $10,000 in support of the Dakar Conference.

In support of five specific 1994 activities of the Programme, the European Space Agency has already made a voluntary cash contribution of $95,000, and the Government of Pakistan has already contributed $10,000. I wish to take this opportunity to express the appreciation and gratitude of the United Nations and my personal thanks for the aforementioned cooperation and genuine support of Member States and the European Space Agency, as well as for this confidence in the Programme.

In the area of hardware, we have completed the distribution of 25 personal computers to universities and research institutes in five countries around the world. These computers were donated to these countries through the Space Applications Programme by the European Space Agency, for use in basic space science research; it should be noted that the ESA has been cooperating fully with the United Nations in its ongoing basic space science activities all over the world.

I wish to express the gratitude of the United Nations to all representatives and to their respective countries, as well as to intergovernmental, regional, international and non-governmental organizations, United Nations agencies and regional economic commissions, and the many enthusiastic and dedicated experts and individuals around the world for assisting the Programme on Space Applications and cooperating with it in achieving its objectives.

I am very grateful to those within the United Nations system who continue to assist the Programme on Space Applications and the cause for which it stands, and to my colleagues in the Space Applications Section as well as in the Committee's Services and Research Section. To them all, both professional and general service staff, as well as to Mr. Jasentuliyana, I wish to offer my profound gratitude for their enthusiastic cooperation with and assistance to the Programme.

In the past few days there have been a number of comments regarding our relocation to Vienna. My contribution to the discussion would be as follows: Our physical relocation to Austria from the United States has given us cause to redouble our efforts and to strengthen our cooperation with all the countries of North, Central and South America and the Caribbean.

We are taking advantage of our current location in Central Europe to enhance our cooperation with all the European countries, their space-related national institutions and appropriate intergovernmental and non-governmental organizations. In this connection, I had the opportunity and privilege to visit the European Space Agency and also to have a dialogue with the Centre National d'Etudes Spatiales (CNES) in Paris two weeks ago. Early in May, I also visited the Swedish Space Corporation Satellitbild in Kiruna, as well as Stockholm University and the secretariat of the International Geosphere-Biosphere Programme, both of which are in Stockholm.

As representatives are aware, we are in the same time zone as not only Europe but also a large part of Africa and the Middle East. Through modern communication systems, we are able to interact with these regions, as well as with Asia and part of the Pacific, during working hours each day. We are committed to enhancing national capacities and to promoting regional and international cooperation, and we look forward to working with all participants to achieve these objectives.

In compliance with General Assembly resolution 45/72, the Office for Outer Space Affairs, through the Programme on Space Applications, has taken a number of major steps to implement the United Nations initiative to establish the Centres for Space Science and Technology Education at the regional level. Our efforts in this regard, up to December 1993, are outlined in paragraphs 8 through 15 and in Annex I of my current report. With respect to the current status of the Centres, we have undertaken and almost completed the following steps:

First, informing Member States of the aforementioned decisions of the United Nations and inviting them to indicate their willingness to host such a Centre; secondly, the issuing of two documents on the Centres, the latest entitled "Centres for Space Science and Technology Education" - Updated project document (A/AC.105/534); thirdly, the organization of evaluation missions to potential host countries in each region; and, fourthly, analysing the reports of the evaluation missions and subsequently selecting the most viable host country or countries for the Centre in each region.

The third step has been completed in Latin America, Africa, the Middle East and Asia regions, as well as in Iran. The fourth step has been completed in Latin America, with Brazil and Mexico having been selected out of four countries - which included Argentina and Chile - to host the Centre in that region. Negotiation is continuing with the Government of Iran in respect of the Centre to be established in that country. In Africa, the United Nations is still awaiting the response of Member States to the report of the evaluation missions in Ghana, Kenya, Morocco, Nigeria, Senegal and Zimbabwe. I wish to add that a number of these countries have responded, but that a majority of them have still to do so. The evaluation mission to Asia - China, India, Malaysia, Pakistan, Sri Lanka and Thailand - was completed at the end of last month; Australia, France and the ESCAP Commission participated in it. The report of the mission should be ready in July this year and will be handled in the same manner as those of the other missions.

We are now in contact with specialists and educators worldwide to develop an appropriate and detailed curriculum of international quality for each of the major academic areas of the Centres' programmes, which include Earth observation and environmental monitoring, satellite communications and geo-positioning systems, and atmospheric and space sciences. Undertaking this task is a major effort, and we plan to use some of the best talent available in both the industrialized and developing countries to accomplish it. Thereafter, we will establish a panel that can advise us on the development and acquisition of teaching modules and related educational materials that can be used to carry out aspects of the curriculum.

A speedy conclusion of the steps outlined above and an immediate resolution of the ongoing negotiations with concerned Member States will enable us to commence the activities at some of these Centres in the fourth quarter of this year.

The United Nations is grateful to Australia, Canada, France, Germany, Spain and the United States of America, as well as to the regional economic commissions, for their support for and contributions to the preparatory work leading to the establishment of the Centres. I wish to reiterate the United Nations appeal to all Member States and relevant intergovernmental and non-governmental organizations for their full cooperation and support for these Centres.

As participants will recollect, I began this statement by addressing the need for all Member States not only to derive practical benefits from space exploration but also to develop the necessary capacities and capabilities that will enable them to effectively participate in a variety of regional and international programmes, particularly those that rely heavily on space-acquired information. Through a variety of activities, including its Space Applications Programme, the United Nations is contributing to the attainment of these goals by assisting in the development of necessary capacities at the local level. For example, upon graduation, the participants in the programmes of the Centres for Space Science and Technology Education should be able to effectively incorporate what they have learned into operational programmes, introduce relevant aspects of the technology into existing education curricula initially at the university level in their own countries, and contribute significantly to national, regional and international programmes. Each Centre graduate will constitute the nucleus of a science and technology culture in his or her own country. However, in order for Member States to actually partake in the benefits of space exploration - including those outlined in this statement - as well as participate in a variety of regional and international programmes in which space science and technology can be an invaluable tool, there must be a commitment to nurture science and technology at the local level.

The Chairman: I should like to take this opportunity to commend the Programme on Space Applications, and specifically the Expert, on the extremely valuable work he has done over the course of the year.

Mr. Halff (Netherlands): With regard to the report of the Scientific and Technical Subcommittee, I should like to restrict my remarks to the issue of space debris, an important and highly urgent matter whose solution demands not only our intensive attention but also a concentration of forces and efforts. It is a problem that will go from bad to worse if we simply talk about it without taking concrete measures and steps. The problem of debris can be resolved only through coordinated efforts on the part of the global scientific, technical and legislative community.

As I already pointed in my statement during the general debate, my delegation is consequently of the opinion that the inclusion of the item on space debris on the agenda of the Subcommittee is highly justified. However, in order to avoid space debris's becoming one of the eternal subjects we are discussing, a deadline should be set for the Subcommittee to finish its discussion and draft a report with all its findings, possibly with recommendations that could serve as the basis for our political debate in the Committee itself. I would therefore like to propose asking the Scientific and Technical Subcommittee to present such a report to the fortieth session of the Committee at the latest.

Pending the outcome of the debate in the Scientific and Technical Subcommittee and COPUOS, provisional measures should and can be taken now. For instance, international cooperation could be enhanced in the compilation of and access to data on space debris, as well as in the monitoring of the space-debris environment. The creation of space debris should be minimized by improving the design of spacecraft in order to reduce the risk of disintegration and explosion. Spacecraft at the end of their life should be de-orbited or re-orbited and retrieved through controlled re-entry.

I should also like to make some remarks on agenda item 7, because the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space is a subject of some concern to my Government.

Although a considerable period of time has elapsed since UNISPACE 2 was held, the recommendations drawn up at that Conference have still not all been implemented. Valuable input and opportunities for the development of space technology capacity in developing countries and for furthering indigenous capacities in that field run the risk of disappearing. Not only would this be a loss for the community of space exploring and exploiting countries, but it also casts doubts on the opportuneness of a third UNISPACE conference. Would it not be preferable to postpone such a third conference until all the recommendations of UNISPACE 2 have been fully implemented and full use has been made of the outcome of that Conference?

Another aspect of a third UNISPACE conference is the question of the topics and subjects to be discussed at it. When discussing the possibility of a third UNISPACE conference, we should above all address the question of the agenda and have an in-depth discussion on it. The Netherlands may have some doubts about the timeliness of UNISPACE 3; we certainly have doubts about such a conference without an agenda meaningful for all participants, not just for one group or another. UNISPACE 3 should address matters of concern to all of us. The Netherlands therefore suggests making the application of space technology in the protection of the environment on Earth one of the agenda items.

Mr. Lessard (Canada): I thank you, Mr. Chairman, for this opportunity to address this Committee once again and to comment on the report of the thirty-first session of the Scientific and Technical Subcommittee, which is now before us.

My delegation has read the report with interest and is in general agreement with its description of the matters raised during the debates, as well as of the conclusions reached by the Subcommittee. I would simply like specifically to state the position of Canada on a few of the items mentioned in the report.

I deal first with the issue of the use of nuclear power sources in space. Canada, as the only country so far to be impacted by a satellite carrying a nuclear power source, worked hard, in cooperation with the other members of this Committee, to develop the Principles dealing with this matter, which were finally adopted by the General Assembly in December 1992 after 14 years of debate. We remain extremely satisfied with this result. We have ideas as to the possible improvement of the existing Principles, and this explains our support for the recommendation that this issue be again considered by the Scientific and Technical Subcommittee at its next session and in following years. We agree, however, with several other delegations which have spoken on this matter that it is premature to undertake a comprehensive review of the Principles until a sound scientific and technical basis for their improvement has been worked out. We also believe that until then, the integrity of the existing Principles should be preserved.

Now a few words on space debris. We believe that it is possible to draw a parallel between the issue of space debris and other environmental problems on Earth, in that the cumulative effect of almost 40 years of continued space activities, involving over 3,500 launches of spacecraft since 1957, have resulted in the creation of a debris population in the near-Earth environment, raising doubts as to the ability of spacefaring nations to carry on business as usual. Should present trends continue, especially in the light of current plans for constellations of small satellites for communications purposes in low-Earth orbit, it is expected that the risk of impact from orbital debris will at some point in the future become a real hindrance to continued access to space.

Canada, as a country very much active in the peaceful exploration and use of space, is of course concerned about this prospect. This is why, like most other delegations, we were very satisfied at having this topic for the first time as a distinct item on the agenda of the Scientific and Technical Subcommittee. This concern also prompted us to undertake several research and other activities relating to debris over the years, from the shielding of RADARSAT - the Canadian Earth-observation satellite using radar technology, to be launched in 1995, and the first satellite to be specifically shielded against space debris - to the analysis of space platforms brought back to Earth and other experiments on materials for the space environment. We have also undertaken consultations with other countries and organizations involved in research on this topic.

Canada subscribes to the view that this matter of growing concern can best be dealt with through international cooperation. We therefore fully support the recommendation of the Scientific and Technical Subcommittee that a continuing, deliberate, specific multi-year plan for its work on this issue should be developed at its next session. We believe that this work plan should consider the entire range of issues relating to a sound understanding of the space debris phenomenon, including the scientific and technical as well as cost-benefit analysis underlying the implementation of concrete measures to address the problem. We look forward to consulting in the months ahead with other interested nations and organizations on the format and content of this future work plan to facilitate the work of the Scientific and Technical Subcommittee at its next session. Canada fully intends to contribute, as possible and appropriate, to this and other international efforts.

Considerable progress has been achieved over the past 30 years in ensuring the peaceful use and exploration of space with important benefits on Earth. Our continued ability to provide for effective environmental and resource monitoring, timely disaster warning and reliable communications services, and to promote sustainable development through the use of space systems, depends on the relative safety of those assets in space. Therefore, Canada supports the concrete practical measures which have already been taken by several nations and organizations to deal concretely with this problem, and looks forward to an ongoing productive international discussion on this matter.

I would now like to say a few words on the issue of the physical nature, use and applications of the geostationary orbit and other matters relating to space communications development. While Canada does not object to the recommendation that this matter be again considered by the Scientific and Technical Subcommittee at its next session, we believe that the question of equitable access of all countries to the geostationary orbit is appropriately dealt with in the context of the International Telecommunication Union (ITU), with specific reference to the planning activities of ITU concerning orbital locations and the relevant sections of the ITU Constitution and Convention, which refer to the undertaking by all Member States to use radio frequencies and the geostationary orbit rationally, efficiently and economically so that countries or groups of countries may enjoy equitable access.

Lastly, Canada is not opposed to the idea of holding a third world space conference. My delegation feels, however, that a formal decision on this possibility must be preceded by additional details on the venue proposed and the funding implications of that choice, as well as by a consensus on an agenda which is balanced and relevant to the contemporary needs and interests of all States and which is oriented towards the concrete applications of space technology. Any such decision must also provide for sufficient time for the necessary consultations and preparations to be made to ensure the success of such an event. My delegation wishes to express its thanks to the secretariat for the study it has undertaken on the various implications of holding such a conference, and looks forward to continuing the discussions on this matter, with a view to promoting an early resolution.

In conclusion, my delegation wishes to express its agreement with the recommendations contained in the report of the Scientific and Technical Subcommittee with respect to the other items.

Mr. Perek (Czech Republic): In discussing the question of space debris, the Scientific and Technical Subcommittee agreed in paragraph 69 of its report (A/AC.105/571) that it was important to have a firm scientific and technical basis for future action on the complex attributes of space debris. We agree that it is important to have a firm scientific and technical basis, but we are also of the opinion that a common understanding of the meaning of the term space debris has to be established first. Without stating what we understand as space debris, it is difficult to discuss debris-measurement techniques, mathematical modelling of the debris environment and other related topics of research on space debris.

There are many objects in outer space. It has to be stated which of them are space debris. Will natural objects, such as meteorites, be discussed too, or will only artificial objects be dealt with? It has to be said at what stage an active artificial object becomes space debris, or what distinguishes an active object from debris. It is not up to the Scientific and Technical Subcommittee to elaborate a legal definition of space debris, but those who will report about scientific and technical research have to know which objects to treat and which to leave out. There are some differences of opinion about which objects may be classified as space debris. For instance, the well known publication *Satellite Situation Report*, by NASA, recognizes two classes of objects: payloads and debris. Payloads are listed as such unless they break up, whether they are active or not. Several authoritative studies, such as the United Nations study, "Environmental effects of space activities", document A/AC.105/420 of 15 December 1988, the November 1988 European Space Agency study, entitled *Space Debris*, and the September 1990 background paper entitled *Orbiting Debris: A Space Environmental Problem* prepared by the Office of Technology Assessment of the United States Congress, consider as space debris all uncontrolled objects.

The most detailed description of the term "space debris" is contained in the very recent position paper of the International Academy of Astronautics (IAA), which in March this year was issued as a United Nations document (A/AC.105/570). Among uncontrolled objects, it makes an exception for scientific satellites which are uncontrolled on purpose.

Bearing all this in mind, my delegation proposed at the session of the Scientific and Technical Subcommittee the following explanation of the term "space debris", based on the IAA document: space debris is all man-made objects in Earth orbit or re-entering the dense layers of the atmosphere which are non-functional, with no reasonable expectation of assuming or resuming their intended functions or any other functions for which they are or can be authorized, including their fragments and parts.

My delegation is convinced that this or a similar explanation of the meaning of the term space debris is necessary for future discussions in the Scientific and Technical Subcommittee. Therefore, we propose the adoption of that explanation of the term "space debris".

We support the statement by the representative of the Netherlands, in particular, the proposal to set a deadline for finishing the discussions in the Scientific and Technical Subcommittee and for drafting a report as a basis for debate in this Committee. This, we feel, is justified by the fact that the special presentations on space debris given at the meetings of the Scientific and Technical Subcommittee and statements made by many delegations agreed on the implications of and risks posed by space debris, and that there was no substantive difference of opinion on this matter.

In this context, it would be useful to ask the Office for Outer Space Affairs to prepare a document for the Scientific and Technical Subcommittee dealing with the questions concerning space debris that will be discussed at the next Subcommittee session.

I turn next to the question of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. The secretariat has prepared an excellent report (A/AC.105/575) for us on the holding of a third UNISPACE conference. It reports, among other things, about the background papers prepared in 1981 for UNISPACE 82. Those background papers were prepared by almost 200 scientists and experts from 28 countries. The effort was coordinated by the IAF, COSPAR and other non-governmental organizations and, ultimately, by the secretariat. The papers appeared in a book of close to 700 pages and covered space science and technology and their applications, pointed out the critical issues and dealt with social and economic aspects of space technology and with international cooperation. Their volume, however, required concentrated study and was too large for use at the Conference.

We believe that good information on outer space should be prepared for the benefit of the participants in UNISPACE 3 but that the extent should be manageable. A book of the size and quality of *Highlights in Space 1993*, as prepared by the IAF and COSPAR and issued as document A/AC.105/566, would serve the purpose very well. Therefore, we propose that the IAF and COSPAR, as well as the International Astronomical Union and the International Society for Photogrammetry and Remote Sensing, be requested to prepare material for a background paper for UNISPACE 3. Those four non-governmental organizations should also be invited to organize, in cooperation /with the host country, a two- or three-day UNISPACE forum preceding the opening of the conference. The programme of the forum would deal with space applications and with future prospects for research on space and the universe. The reason is that adequate conditions for research, in space as well as on the ground, are highly important for the further development of space activities.

As regards the agenda of the conference, we favour an emphasis on substantive agenda items as a basis for general consideration. Therefore, we suggest that general themes, such as those proposed in paragraph 71 of document A/AC.105/575, dealing with a review of developments, a review of policy issues and with international cooperation in general, should be on the agenda of plenary meetings. The committees of the conference should concentrate on substantive items. In the list of specific areas in paragraph 72 of the document, we note that items on outer space research and the management of outer space are missing.

These topics should not be left out of the agenda of a widely attended United Nations Conference on outer space. Therefore we propose some changes in paragraph 72.

The Committee should discuss specific areas, such as:

(a) Satellite communications, and in particular transnational satellite broadcasting for educational and development purposes;

(b) Remote sensing: its contributions to sustainable development;

(c) Meteorology, disaster warning and relief and navigation: a case for international cooperation;

(d) Research and management of outer space: perspectives and participation in international programmes;

(e) Space science, technology and applications: education and training;

(f) Spin-offs from space technologies: their benefits and applications;

(g) Space-related activities of the United Nations: expansion and improvement.

Some of the proposed changes concern the substance and some are rather cosmetic, but even the latter ones would, in our opinion, be useful. This is not a final proposal for the agenda. It is, rather, an illustration of what we have in mind by the term "subject-oriented agenda". I should just like to remind the Committee that in UNISPACE 2 the agenda was oriented to general aspects, not to individual subjects. For instance, in the report contained in document A/CONF.101/10, remote sensing appears in three different sections, which is not really the most efficient way to deal with the subject.

In my opinion, UNISPACE 2 would have been more effective if it had had a subject-oriented agenda.

Mr. CHANDRASEKHAR (India): Our delegation would like to make a few remarks on agenda item 5, "Report of the Scientific and Technical Subcommittee on the work of its thirty-first session", and also on agenda item 7, which deals with the question of the implementation of the recommendations of the UNISPACE-82 Conference.

During its thirty-first session, the Scientific and Technical Subcommittee dealt with a large number of items on its agenda. This session also included a number of interesting presentations on various topics related to its agenda. On the special theme chosen for the attention of this session, COSPAR and IAF organized a seminar involving eminent experts in the field of space applications for disaster prevention, warning, mitigation and relief. We would like to place on record our appreciation for this effort by COSPAR and IAF, which has been very useful in focusing the attention of delegations on various developments, as well as on the possibilities for space applications and for international cooperation.

We would also like to express our satisfaction at the work conducted during this session of the Subcommittee. In particular, our delegation is very pleased to note that the Subcommittee began consideration of a new item concerning space debris, and we were encouraged by the focussed discussions and recommendations of the Subcommittee. The Subcommittee's decision to focus on understanding debris research in terms of measurement techniques, mathematical modelling and the characterization of debris environment, as well as spacecraft design measures for protection, is very appropriate.

Also, the decision to develop during the next session a continuing, deliberate, specific, multi-year plan for work on this agenda item would help us to achieve rapid progress.

Turning towards the work of the Subcommittee on the use of nuclear power sources (NPS) in outer space, our delegation notes the Subcommittee's view that the principles adopted by the General Assembly should remain in their current form until such time as they are amended. Further, our delegation also supports the view that the purpose and scope of the review should be clearly agreed before any revisions are undertaken. We also support appropriate contributions from the International Atomic Emergency Agency in terms of information and analysis relevant to the principles which could assist in the process of revision and reviews by the Subcommittee.

During the thirty-first session of the Scientific and Technical Subcommittee, progress related to a number of important subjects such as remote sensing, space transportation and the characteristics and use of GSO were discussed. Similarly, the reviews and information exchange on programmes related to space sciences and those related to the Earth environment have been very useful. Considering the wide range of missions in space sciences that are being planned or operated, it would be pertinent to examine the increased opportunities for international cooperation, particularly involving more developing countries.

With regard to the subject of the review of the implementation of the recommendations of UNISPACE-82, first of all we would like to express our appreciation to the Chairman of the Working Group of the Whole, Mr. Muhammad Nasim Shah of Pakistan. We would like to stress that the priority areas identified by the Working Group in its report (A/AC.105/571, Annex 11) for the United Nations space applications programme, as well as other activities, should be given special attention.

We are happy to note that, following the recommendations of the Working Group and the Subcommittee during 1992, the General Assembly approved an additional budget allocation for the programme on space applications. We would like to reiterate the need for the continuation of such support.

We take this opportunity also to convey our appreciation to Mr. Abiodun, the United Nations Space Applications Expert and his staff, for their commendable work in implementing the Space Applications Programme. We also note with appreciation the further progress on the evolution of regional centres for space science and technology education, and we express our desire to see them established soon. In this regard, we are also pleased to report that an evaluation mission visited the Indian Space Applications Centre and Physical Research Laboratory at Ahmedabad and the Indian Institute of Remote Sensing at Dehra Dun, which had been proposed earlier as a regional centre.

We look forward to early decisions on this matter, and reiterate our keen interest in promoting further international cooperation in the field of space science and technology education.

While we are speaking on agenda items 5 and 7, our delegation wishes to make some remarks on the important subject of holding a third UNISPACE conference.

Following the recommendation of the General Assembly in its resolution 47/67 of 14 December 1992, which states in paragraph 20 that

> "... Member States might discuss, during the next sessions of the Committee under its agenda item entitled "Other matters", the possibility of holding a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space in the future",

we have been considering the subject of holding such a conference. Our Committee considered at its last session, at some length, the goals and objectives, as well as matters related to organization, venue, timing and funding of such a conference.

During the same session, the Committee also requested that the Scientific and Technical Subcommittee further discuss these matters at its thirty-first session in 1994 in order to promote an early conclusion on the matter by the Committee.

This was endorsed by the General Assembly last year in its resolution 48/39. The General Assembly also agreed that the most important step was to define a set of sharply focused objectives for such a conference and that details such as organization, venue, timing and funding should also be considered. The General Assembly also noted that the goals set for such a conference might be achieved by other means, including the intensification of work with the Committee.

As a result of this background, and also taking into account the views expressed by various delegations earlier, our delegation submitted a working paper at the thirty-first session of the Scientific and Technical Subcommittee which outlined the preliminary concept for the UNISPACE-3 conference. This paper dealt with the rationale, basic objectives and suggestions for organization, venue and timing-related questions in detail. It was submitted to facilitate the exchange of views among the members of the Committee and to assist in the process of arriving at a common consensus.

There were also other working papers which were submitted during this session, including those submitted by the delegation of Pakistan and by the States members of the Group of 77. The Group of 77 paper was a result of the deliberations of the members of that Group and it represents their common views, including the ideas covered by the working papers of India and Pakistan and also valuable contributions from other members.

In the context of the exchange of views which have taken place in the past, our delegation would like to stress a few points.

There is a sound rationale for considering holding a third UNISPACE conference, taking into account changes that have occurred since 1982 in the global political situation and particularly several developments in the field of space technology and its applications. There has been substantial demand for the peaceful applications of outer space in developing nations, as well as several problems which need urgent solution and could be greatly facilitated by the application of space technology. Therefore, there was strong emphasis on the substantial expansion of and new initiatives in international cooperation, including consideration of the appropriate development and diversification in policy and legal frameworks. In addition, the Committee has also agreed that an effective way to maintain outer space for peaceful purposes is to promote and substantially expand international cooperation in the exploration and peaceful uses of outer space. In the context of significant technological developments and their applications over the past decade, it is necessary to find new ways to enable various countries, particularly developing countries, to benefit from the new possibilities and to effectively participate in programmes which have relevance to all. A truly global analysis is necessary to address this issue fully.

Moreover, several developments over the past 12 years provide new opportunities for greater international cooperation. These relate to applications in the field of monitoring Earth's environment and achieving sustainable development. In this context, it is pertinent to note that the effective follow-up of the recommendations of the United Nations Conference on Environment and Development, held at Rio, and Agenda 21 as it relates to outer space dictates the imperative of global cooperation and participation.

This implies the need for discussing various cooperative actions, policies and programmes of activities in a wider context, with the full participation of States, including those outside the membership of the Committee. There are several such areas that command the priority needs of most countries and can benefit from cooperation in space. Applications in the fields of education, communications for combatting natural disasters, and research in meteorology are a few examples.

A search for new approaches to international cooperation is also required in the context of budgetary constraints faced by space programmes all over the world. At the same time, there is a need to expand the use of space in several developing countries, where the greatest potential for applications is yet to be realized. A major United Nations conference on space with universal participation would promote increased international cooperative use of space for the benefit of all countries in a unique way.

Hence, we consider that such a conference could serve to diversify and deepen international cooperation. The aim is not to restrict the scope of existing forms of cooperation, but to explore additional ways and an agenda for future cooperation, particularly in those areas which address the common needs of all countries. While the Committee through its work addresses in general the question of promoting international cooperation, this process itself can be intensified, revitalized and rapidly facilitated through a third UNISPACE conference, which could allow the participation of those countries beyond the membership of this Committee. Already, many such countries are using space and are in need of space applications. As UNISPACE-82 itself was in a way responsible for the expansion of awareness, interest and access to space applications by increasing number of countries, the third conference could serve to further expand cooperation in the context of newer developments.

The deliberations in our Committee and the Scientific and Technical Subcommittee have indicated that there could be many focused objectives for such a conference. These could broadly include, for example, a review of developments in outer-space technology and its applications to consider new opportunities for a substantial increase in international cooperation; or the consideration of initiatives for international cooperation in areas of common international interest, such as environmental monitoring, disaster warning, education and so on; and, importantly, a review of legal and policy issues in the context of global developments over the past 12 years with a view to achieving greater cooperation in harnessing space technology for social, humanitarian and economic development.

As regards the organization, our delegation shares the common desire of many others that participation should be open to all Members of the United Nations, as in the case of UNISPACE-82. Also, the suggested duration of the conference is two weeks, including three days for plenary opening meetings, five days for working meetings and two days for final adoption of the report in the plenary of the conference. As an economy measure to partly offset costs, it was also suggested that our Committee's session could be shortened by one week in the year of the conference. It has also been suggested that preparations for UNISPACE-3 could be accomplished at a minimal cost if the Office for Outer Space Affairs could serve as the secretariat under the overall direction of a Secretary-General and with COPUOS and its Subcommittees serving as preparatory committee.

As was carried out in the case of UNISPACE-82, the various pre-conference activities and other activities related to the conference could be planned. Various regional seminars and workshops devoted to the subjects to be considered by the conference could be appropriately organized under the United Nations Programme on Space Applications. The working papers submitted in the Scientific and Technical Subcommittee on this subject have dealt with an indicative schedule which considered the feasibility of holding such a conference in August 1996. We would also like to recall the discussions held during the session of the Scientific and Technical Subcommittee and the common desire in the Committee to settle various matters related to the conference, such as venue, timing, and so on, by consensus. In this connection, we would like to reiterate the offer of our Government to host the conference in India.

We note with appreciation the commendable effort of the Secretariat, which, in response to the request of the Scientific and Technical Subcommittee, has submitted a document (A/AC.105/575) providing an analysis of the likely organizational, funding and logistical implications of the conference. Considering the universal relevance of outer space and the profound importance of peaceful developments for the benefit of all countries, India, as a developing nation, proposes to host the conference. We hope that this would receive the favourable consideration of delegations and would be acceptable to the Committee. We would also like to draw attention to Annex II of the aforementioned Secretariat document, which indicates that costs to the United Nations in the case of an Indian venue would be lower than in other locations.

Our delegation urges that based on the discussions so far and through further consideration, the decision on the conference might be arrived at at the current session. We will be willing to contribute our best in the Committee to promote consensus and to reach an early conclusion on this matter.

Mr. Sölendil (Turkey): I will restrict my remarks to the holding of a third UNISPACE conference. My delegation welcomes the report prepared by the Secretariat on the subject, which provides a good background paper for discussions on the matter. My delegation also believes that the suggestion made in paragraph 13 - achieving the objectives by alternative means - can be elaborated on further.

We fully expect those means to be put forward in the Committee's discussions. We also agree with the view that a meaningful and workable agenda should be thoroughly discussed as a basis of careful preparation.

Notwithstanding the feasibility of a third UNISPACE conference and reserving further comments and judgement on the matter, we do wish to comment on the timing aspect in case there is Committee consensus to proceed with the meeting. Holding the conference in 1996 would seem a bit too early to allow for adequate preparation for a successful meeting of such vast scope; 1997 or 1998 might therefore be better.

The meeting rose at 11.55 a.m.

United Nations A/AC.105/PV.399

General Assembly

Official Records

Committee on the Peaceful Uses of Outer Space

399th Meeting
Thursday, 9 June 1994, 3 p.m.
Vienna

Chairman: Mr. Hohenfellner . . . . (Austria)

The meeting was called to order at 3.05 p.m.

Attendance by non-members of the Committee

The Chairman: I should like to inform members that I have received a note verbale from Panama in which it requests permission to attend the current session of the Committee on the Peaceful Uses of Outer Space as an observer. I therefore suggest that, in conformity with past practice, we invite that delegation to attend the current session and to address the Committee as appropriate. This is, of course, without prejudice to further requests of this nature and does not involve any decision by the Committee concerning status. It is a courtesy we customarily extend to delegations. If there is no objection, we shall proceed accordingly.

It was so decided.

Organization of work

The Chairman: Later at this meeting, we will continue our joint consideration of agenda item 5, "Report of the Scientific and Technical Subcommittee" and agenda item 7, "Implementation of the recommendations of UNISPACE 82". I urge all delegations wishing to speak on these agenda items to inscribe their names on the list of speakers as soon as possible.

I would remind representatives that, as I proposed in my opening statement, the matter of the third UNISPACE conference is being considered by the Committee under item 5, "Report of the Scientific and Technical Subcommittee", and that delegations wishing to speak on this important subject should do so under agenda item 5. We will be continuing our consideration of this item tomorrow morning and, if necessary, on Monday.

I would also remind representatives that tomorrow morning there will be a meeting of the Group of Latin American and Caribbean Countries at 9 a.m. in Conference Room 7 and that tomorrow afternoon we will conduct an informal meeting of the Committee to discuss matters related to the working methods of the Committee and its subsidiary bodies, in accordance with the requests of several delegations.

Ways and means of maintaining outer space for peaceful purposes *(continued)*

Mr. Wiryusumarto (Indonesia): With regard to the item under consideration, my delegation would like to recall that the General Assembly, in its resolution 48/39 of 10 December 1993, paragraph 37, requested the Committee

> "to continue to consider, as a matter of priority, ways and means of maintaining outer space for peaceful purposes".

My delegation is of the view that the General Assembly's request shows the concern felt by the international community on the need to promote international cooperation in the peaceful uses of outer space, taking into consideration the needs of developing countries. Accordingly, outer space should therefore be used entirely for peaceful purposes and for the welfare of mankind. The Committee, through its work in the scientific, technical and legal fields, should continue its role in ensuring that outer space is maintained for peaceful purposes.

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My delegation shares the views of previous speakers that a good way to broaden and deepen international cooperation in outer space is through international and regional programmes undertaken as part of international and regional endeavours. In order to achieve this goal, the Committee should complement and contribute to the work being done in the Conference on Disarmament, particularly on questions relating to the prevention of an arms race in outer space, while considering that the peaceful and non-peaceful uses of outer space are inseparably linked.

In this respect, the Indonesian delegation feels that the process of exchange of information between the Conference on Disarmament and this Committee, particularly concerning the non-military use of outer space, could be immediately implemented. In order to strengthen the cooperation between these two bodies, my delegation would like to urge the Committee to include in its discussions on this aspect an examination of the possibility of establishing a working contact between them, including a mechanism through institutionalization of dialogue. The rationale behind this idea is to keep the Committee well informed of the progress made by the Conference on such questions.

As we all are aware, outer space is the common heritage of mankind, and it should be explored and utilized exclusively for peaceful purposes and for the benefit and in the interest of all mankind. My delegation would like to reiterate its strong support for the view that international standards should be elaborated to ensure the widest possible access to space resources and technology. In this regard, discrepancies in the enjoyment of the benefits of outer space could be curtailed if a legal framework designed to facilitate and guarantee international cooperation and interdependence is well laid out and adhered to.

The Chairman: We have concluded our consideration of agenda item 4.

Report of the Scientific and Technical Subcommittee on the work of its thirty-first session (A/AC.105/571) *(continued)*

Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space *(continued)*

Mr. Zaman (Pakistan): My delegation would like to express its satisfaction at the progress made by the Scientific and Technical Subcommittee during its thirty-first session. The United Nations Programme on Space Applications, carried out by the Office for Outer Space Affairs, has been making efforts not only to cope with its mandate but also to enhance its scope of activities in the light of the UNISPACE 82 recommendations within the meagre financial resources available to it.

My delegation would like to express its appreciation to the various Member States and the specialized agencies that are providing in-kind or cash support for continuing Programme activities. Recognizing the inadequacy of the financial resources made available over the years to the Programme under the regular budget of the United Nations, the Committee on the Peaceful Uses of Outer Space at its last session recommended increasing the regular budget allocation for the Programme. That recommendation was endorsed by the General Assembly, which approved an additional budget allocation for the 1994-1995 biennium. This additional allocation is recognized and appreciated. Although this increase is still not adequate, it is better to have something than nothing. Our Committee should continue to make efforts to get the allocations adequately enhanced to meet the actual requirements of the Programme.

We are all aware of the immense benefits that have accrued to many countries as a result of the recommendations adopted by the UNISPACE 82 Conference, held in August 1982 in Vienna. Since then, more than a decade has passed and many more advances have been made in space technology and its applications, and the situation now obtaining justifies the holding of a third UNISPACE conference under the aegis of the United Nations. A paper offering suggestions on how to organize UNISPACE 3 was proposed by the Group of 77 countries and submitted to the Subcommittee. My delegation would suggest that those elements be discussed in detail by our Committee in order to arrive at an early conclusion on the matter. In this connection, the report prepared by the Secretariat, which is a very useful document, is also highly appreciated owing to its relevance. It also should be made use of while discussing the holding of UNISPACE 3.

Concerning the establishment of United Nations Regional Centres for Space Science and Technology Education to develop indigenous capabilities, the United Nations Expert on Space Applications provided, during the morning session, detailed information on the progress achieved so far. It may be pointed out that information provided in document A/AC.105/534, prepared by the United Nations Expert, contains, *inter alia*, the revised estimate of the budgets for setting up such Centres in Africa, Asia and the Pacific, Latin America and the Caribbean, and Western Asia.

It is noteworthy that while the budgetary figure given by the United Nations Expert in 1991 for the establishment of each Centre was $4.87 million, with an implementation period of four years, the budget estimates given in the revised document are around $6.5 million for such a Centre with an implementation period of five years. Evidently, with the passage of time, the overall cost of establishing such Centres is increasing, and it might become very difficult for the potential host countries in each economic region to co-sponsor these Centres without the much-needed external financial support. In this connection, the United Nations Office for Outer Space Affairs should make every effort to arrive at a final and agreeable decision in consultation with the potential host countries in each region as soon as possible.

On the question of revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, my delegation welcomes the various studies and presentations made by the Member States, which provided in-depth ideas and research on the various aspects of the questions at issue. These will certainly assist the Subcommittee in evolving ways and means of revising those Principles to the satisfaction of all concerned, if so required. It is important that such studies on this subject be continued, as this would help facilitate the process of revision of those Principles.

Concerning the item on space debris, my delegation would express its appreciation for the scientific and technical presentations made at the thirty-fourth session of the Scientific and Technical Subcommittee on the various aspects of space debris. As noted in its report, the Subcommittee will, it is hoped, develop a continuing and specific multi-year plan to study in detail the various elements involved. My delegation also supports other representatives' suggestions to fix a time period for achieving the desired results.

My delegation would like to place on record its appreciation for the two world bodies, namely, the Committee on Space Research (COSPAR) and the International Astronautical Federation (IAF), for organizing, on an annual basis, the symposia on various themes at the annual sessions of the Scientific and Technical Subcommittee. During those symposia, many illustrative technical presentations were made on state-of-the-art developments in and applications of space science and technology. We hope that, in keeping with their past record, the COSPAR and IAF will continue to arrange for more such presentations in the future, in view of their immense usefulness to the world's scientific community.

Mr. Fulda (Germany): The focal point of this year's session of the Scientific and Technical Subcommittee was undoubtedly the taking up of the question of space debris as a separate agenda item. For quite a long time my delegation had advocated this move. We are very satisfied that it is now possible to deal with this ever-growing problem of space flight.

The first round of discussions on space debris was successful, as it was possible to acquaint the Subcommittee with the scope of the technical aspects and problems involved. We have proposed that, after this first step of a general *tour d'horizon,* the Subcommittee should structure the discussions of the subject. To our great satisfaction, this proposal is now reflected in the report of the Subcommittee, which says

> "at its next meeting it should develop a continuing, deliberate, specific multi-year plan for its work on that agenda item". *(A/AC.105/571, para. 71)*

The German delegation will constructively participate in drafting this work plan and in providing information on the topics concerned. As a result of this process, we expect consensus to be reached on the technical characteristics of space debris and on ways and means of effectively dealing with this problem.

Germany has during the last year actively supported space applications programmes prepared by you, Mr. Chairman, and the Office for Outer Space Affairs. I should like to take this opportunity to thank the Office once more and, in particular, the Expert on Space Applications, Mr. Abiodun, for the remarkable work being done in that field.

The German space agency, DARA, has become co-sponsor of the United Nations-European Space Agency workshops on basic space science. In order to provide further detailed information on German space activities to Member States, the German delegation has submitted two reports: "International cooperation in the peaceful uses of outer space: activities of Member States", in document A/AC.105/567/Add.3, of 23 February 1994, and "National research on space debris", in document A/AC.105/565/Add.2, of 23 February 1994.

The Scientific and Technical Subcommittee discussed several aspects of the possible convening of a third UNISPACE conference. At the main Committee's meeting last year, some discussions had already been devoted to this issue. These deliberations eventually led to General

Assembly resolution 48/39, of 10 December 1993, which contains a twofold approach. First, it recommends a thorough analysis of the possible objectives and organizational details of such a conference. Secondly, it notes that the goals set for such a conference might be achieved by other means, including intensification of work within this Committee.

I thank the secretariat for presenting a report dealing with the first of these mandates. I hope that our Committee will ask the secretariat to prepare a similar report for our next meeting, concentrating on the second question - that is, to analyse ways and means of achieving the same goals without convening a special conference. Only on the basis of such a comparative examination will this Committee be well prepared to decide upon the most adequate steps to be taken.

Let me briefly express some first reactions to the report of the secretariat contained in document A/AC.105/575. Unfortunately, this document was distributed to capitals only recently, which prevents my sharing with the Committee any views elaborated after examination by all the competent authorities in my country. I may state, however, that it contains several interesting ideas, particularly with regard to international cooperation on making use of earth observation data. We have so far dealt with these problems when talking about space benefits. It is my impression that progress in this field could pave the way for a fruitful international conference. We have to maintain our position that any conference assembling Ministers and high-ranking specialists needs careful preparation, which has to be pursued on the basis of an agenda adopted by consensus. Having this in mind, we should avoid rushing into too ambitious a timetable.

Mr. Fiuza Neto (Brazil): With your permission, Mr. Chairman, I intend to touch briefly upon some of the principal aspects of the thirty-first session of the Scientific and Technical Subcommittee, held earlier this year.

The Brazilian delegation was heartened by the fact that for the first time the Subcommittee had on its agenda, as a separate item, the question of space debris. The initiation of formal discussions on this urgent matter within COPUOS was long overdue and was thus all the more welcome. In our view, the highly informative technical presentations made on this subject, which elicited a significant response from many delegations, warrant targeting space debris for consideration on a priority basis, beginning at the thirty-second session of the Scientific and Technical Subcommittee.

That proposal stems from our understanding that the Scientific and Technical Subcommittee was established with the basic objective of supplying the Legal Subcommittee - which constitutes the heart and soul of COPUOS - with updated and precise scientific information to assist Member States in the process of elaborating international legislation with regard to outer space. However, in recent years the Scientific and Technical Subcommittee has somewhat lost touch with its original mandate. Therefore, the consideration of space debris on a priority basis, so as to establish the convenience of taking up the matter also in the Legal Subcommittee, would seem to be appropriate.

In this regard, Brazil fully supports the view expressed by the delegation of the Netherlands that a deadline should be set for the conclusion of discussions on this item in the Scientific and Technical Subcommittee, and that a report should be prepared as an input for political debate in the Committee.

My delegation took note with great satisfaction of the statement made by the delegation of the United States of America to the effect that the Principles on nuclear power sources were consistent with American practice in this area and that, as a consequence, a revision would not be sought at this stage. Brazil fully agrees that such a step is not needed at the present time, though nuclear power sources should continue to be discussed in the Subcommittee with a view to following developments in the scientific and technical field. It would appear, however, that some of the considerable energy which has been geared towards this subject in recent years could perhaps now be diverted to other more pressing items, particularly that on space debris.

The Scientific and Technical Subcommittee also debated the possible convening of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. During the session, documents were presented on the subject by the Indian and Pakistani delegations, and working paper A/AC.105/C.1/L.199 was drafted by the Group of 77. It is the opinion of my delegation that these texts provide an adequate basis for initiating a structured discussion on the subject during the present session.

We have, in recent deliberations on a third UNISPACE conference, heard statements to the effect that the proponents of such an event need to present convincing evidence of the real necessity for such an initiative. However, it seems to the Brazilian delegation, which in principle favours the convening of a third UNISPACE conference, that unless existing doubts regarding the holding of such a conference are detailed it will be difficult to establish what would actually constitute a convincing piece of evidence.

The recently released report (A/AC.105/575) of the secretariat entitled "Matters related to the possible holding of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space", provides us with a great deal of food for thought and tackles with efficiency questions such as organization, logistics and funding. Together with the documents to which I referred earlier, it represents an important contribution to our discussions.

Turning now to the implementation of the recommendations of UNISPACE 2, the Brazilian delegation would like to express its regret that the resources available for carrying out the Programme on Space Applications remain scarce. Therefore, the Programme continues to rely heavily on voluntary contributions from Member States. The announcement made by Austria on Tuesday to the effect that it would be donating $20,000 to that end was an excellent example of how to overcome the problem.

Brazil, for its part, is honoured to contribute to the Programme through the offer of training fellowships for in-depth training in various areas relating to space activities. Our long-standing commitment to the Programme enables us to call on Member States in a position to do so to continue to lend their support to the Programme.

Mr. Sakss (United States of America): It is my pleasure to make a few remarks on the accomplishments of the Scientific and Technical Subcommittee, which met in February. The Subcommittee's session was productive, covering a broad spectrum of international space activities and issues, ranging from remote sensing of the Earth by satellite to space debris. My delegation was grateful for the opportunity to hear other delegations highlight their accomplishments in space in the last year. We also appreciated the opportunity to review for the Subcommittee some of our key activities.

As we noted during the Subcommittee session, 1993 was another busy year for NASA's international activities. Astronauts from Germany and Switzerland flew on Space Shuttle missions last year. These missions included payloads and experiments that involved researchers and science teams from around the world. The Hubble Space Telescope servicing mission was successfully completed in December 1993; the astronauts, including one from the European Space Agency (ESA), completed all 11 servicing tasks. The Space Station was redesigned and, in December 1993, Russia accepted an invitation to join the United States, Canada, Japan and nine members of the European Space Agency in participating in this international endeavour.

The Subcommittee also addressed such scientific and technical issues as international cooperation in orbital debris, the safe use of nuclear power sources in outer space and a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. Let me briefly outline my delegation's views on these important matters.

On the subject of orbital debris, my delegation joined consensus in the Subcommittee in committing, for the next session, to develop a continuing, deliberate, specific multi-year work plan for the Subcommittee's work on this agenda item, including focusing on the subject of acquisition and understanding of data on the characteristics of the orbital-debris environment, with a view to establishing a common understanding that could serve as a basis for further deliberations. The United States continues to believe that it is not appropriate, at this time, to move the discussion of orbital debris into the Legal Subcommittee or to develop recommendations in the Scientific and Technical Subcommittee to underpin new legal norms for orbital debris. An adequate discussion of the scientific research in the field must be accomplished and an adequate base of knowledge must be established within the Scientific and Technical Subcommittee before we consider whether new legal norms should be developed.

My delegation also supports the Subcommittee's report language in which references to orbital debris contained in consensus paragraphs properly characterize the issue and set forth a rational process to address it. As requested of Member States by the Subcommittee, the United States intends to submit information on practices we have adopted that have proved effective in minimizing the creation of orbital debris.

The subject of safe use of nuclear power sources in outer space continues to be of interest to the United States, particularly for space missions where other power sources would not be enabling. Based on a review of our position on the Principles on the safe use of nuclear power sources in outer space, the United States does not seek specific changes to the Principles at this time.

Finally, regarding holding a third UNISPACE, we appreciate the work done by the secretariat in preparing its report (A/AC.105/575) on the financial and administrative implications of holding the conference. The United States shares the view that the significant changes in the international scene that have occurred since UNISPACE 82 provide a real opportunity to deepen and broaden international cooperation in space. Therefore, we are prepared to consider detailed proposals concerning the agenda, the venue, financial implications and administrative aspects of a third conference. At that point we would be in a position to move toward a final decision on convening such a conference.

The Chairman: I want to take this opportunity once again to urge delegations to make full use of our conference facilities by adding their names to the list of speakers on the various items before the Committee as soon as possible.

The meeting rose at 3.45 p.m.

United Nations A/AC.105/PV.400

General Assembly *Official Records*

Committee on the Peaceful Uses of Outer Space

400th Meeting

Friday, 10 June 1994, 10 a.m.
Vienna

Chairman: Mr. Hohenfellner . . . . (Austria)

In the absence of the Chairman, Mr. Forna (Romania), Vice-Chairman, took the Chair.

The meeting was called to order at 10.25 a.m.

Report of the Scientific and Technical Subcommittee on the work of its thirty-first session (A/AC.105/571) ***(continued)***

Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space ***(continued)***

Mr. Lessard (Canada): It is a pleasure for my delegation to address the important topic relating to agenda item 5. At the last session of the Scientific and Technical Subcommittee, the Working Group of the Whole studying this item proposed some conclusions on the further implementation of the recommendations of UNISPACE 2 and on the future work of the secretariat, and these conclusions were adopted by the Scientific and Technical Subcommittee in its report. Canada agrees with this result, and my delegation would like to add its voice to that of other delegations in thanking the Director, the Expert on Space Applications and the staff of the Office for Outer Space Affairs for their impressive work in the context of the United Nations Programme on Space Applications.

My delegation would like to take a few moments to highlight some recent examples of Canadian cooperative initiatives with other nations, including developing countries, involving applications of space technology in furtherance of the recommendations of the UNISPACE 2 Conference.

In the field of distance learning via satellite, I would like to mention the ongoing activities of the Télé-Université centre at the Université du Québec, which involved such projects as the creation of training courses in cooperation with Argentine institutions and the transmission of the information through two-way video and voice teleconferencing. I might also mention the activities of the Telemedecine Centre at Memorial University in Newfoundland, which has been involved for over two decades in research on the use of interactive communications technologies to supplement health and education services in remote areas of Canada and in several other countries, such as Kenya and the Philippines. Still in the field of telecommunications, reference can be made to the provision by the Canadian International Development Agency in recent years of domestic INTELSAT receiving stations as well as some training to such countries as Peru and Mozambique.

In the field of Earth observation, Canadian aid and research agencies continue to seek new joint-applications development and technology-transfer programmes with developing countries, particularly in order to realize the economic and environmental benefits we hope to achieve with our RADARSAT Earth observation satellite, scheduled for launch in early 1995.

Canadian assistance activities, undertaken through both the Canadian International Development Agency and the International Development Research Centre, with the active participation of the Canada Centre for Remote Sensing, have contributed to remote sensing on all continents, involving such countries as Brazil, Burkina Faso, Cameroon, the People's Republic of China, Costa Rica,

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Egypt, Indonesia, Jordan, Peru, Malaysia, Mali, Thailand and Viet Nam. Project activities involve, for example, the provision of early assistance in the development of satellite receiving stations, such as the LANDSAT TM station in Thailand. Canada's many universities, technical schools, private companies and individuals provide experts and technicians in many developing countries with education and practical hands-on training in the use of remote-sensing products and services. Canadian industry participates directly in the establishment of domestic commercial capabilities through joint ventures and partnerships.

In 1993 Canada, through the Canada Centre for Remote Sensing and in cooperation with the Canadian Space Agency, the International Development Research Centre and the private company Radarsat International Inc., began a global airborne synthetic aperture radar programme, called GlobeSAR 1993, involving countries in the Middle East, Africa and the Asia-Pacific region. This project, which was designed to demonstrate the capabilities of the future RADARSAT satellite, was a follow-on to the 1992 ESA-sponsored SAREX airborne radar mission to South and Central America. The approach is to organize workshops designed to inform the local remote sensing communities of the nature of the GlobeSAR project, and the goal is eventually to have developing countries define their own resource management and research priorities and to jointly develop methods to apply the resulting information for policy development and management decision-making, while helping to develop a local capacity in radar remote sensing. The Canada Centre for Remote Sensing and other Canadian and international agencies are now in the final stages of preparation for a new phase of the GlobeSAR programme, which will focus once more on South America and which will likely be launched this year.

In conclusion, I should like to say that Canada fully recognizes the important role which space technologies can play in promoting sustainable economic and social development in many regions. This explains the active involvement of Canada in the relevant working groups of the Space Agency Forum as well as of ESA to study precisely this question. We believe that enhanced international cooperation, where possible and appropriate, can go a long way towards realizing those benefits.

Mr. Galazka (Poland): We would like to express our satisfaction that the subject of space debris was a separate agenda item at the thirty-first session of the Scientific and Technical Subcommittee. Together with many other delegations, we had been advocating this item's inclusion for several years. We share and support the opinion expressed here by the Netherlands and Canada that space debris is a very important problem, but it is only one of the problems of the outer space environment and others are still awaiting consideration.

As regards UNISPACE 3, one agenda item should be the general problem of protecting and preserving the outer space environment, and not only the issue of space debris. We also support the idea, first expressed by the Netherlands, that a deadline should be set for the final report on space debris. In addition, cooperation on this issue with international organizations such as COSPAR and the IAF, as well as the Conference on Disarmament in Geneva, is imperative.

We share the opinion that every country should have free access to the geostationary orbit. Realizing, however, the unique character of that orbit, we would like to propose that our Committee make an official recommendation stating that all users of the geostationary orbit should remove their space objects from the orbit after their work is completed. Removing non-functional satellites is currently the general practice of the geostationary orbit's users; however, an official recommendation by COPUOS is, in our opinion, required. If such a recommendation is adopted, the Scientific and Technical Subcommittee should define the minimum distance of the removed space objects from the orbit, because from a mathematical point of view alone the orbit has no width. We believe this is just one step forward in the consideration of space debris and the question of the geostationary orbit.

Ms. Zheng Lizhong (China) *(interpretation from Chinese):* Allow me at the outset to express my gratitude to our Chairman for chairing this session and to the secretariat for the work it has accomplished.

The Chinese delegation considers that during the past year the Scientific and Technical Subcommittee has made positive progress and achieved fruitful results at its thirty-first session. We should like to express our appreciation for this and hope that you, Sir, will convey our sentiments to its Chairman, Professor Carver.

As the world economy grows more prosperous and social development progresses, the needs of the international community in the area of the utilization of outer space are also continually increasing. Since UNISPACE 2 in 1982, countries throughout the world and the relevant United Nations organizations have made long-term, tireless efforts towards the peaceful use and exploration of outer space through the implementation of the United Nations Programme on Space Applications. China highly values the achievements of the relevant United Nations bodies in pushing forward this Programme.

During 1993 the Programme's implementation involved a multiplicity of activities, such as in-depth training, long-term research, technology advisory services, training courses, workshops, symposia and so on. Three training courses, three workshops and two regional conferences were organized, covering synthetic aperture radar (SAR) applications, data image processing, disaster prevention, remote sensing education and space communications. Furthermore, 11 series of activities are to be launched in 1994. They include the utilization of space technology to strengthen socio-economic and environmental security.

The Chinese Government has always supported and actively encouraged the implementation of the Programme on Space Applications which we believe, will have a positive effect on consolidating exchanges in the field of space science and technology, and in particular on the effective sharing of results and the collection of experience aimed at benefiting developing countries and promoting social progress. During the period 1993-1994 China provided four one-year fellowships to this Programme.

The Chinese delegation avails itself of this occasion to announce that during the period 1994-1995 the Chinese Government will provide further support to the Programme in the following two main areas. First, in 1994 China will contribute another two one-year fellowships for developing countries covering training in remote sensing, cartography and satellite geodesy. Secondly, from 14 to 18 September 1994 China will host and jointly organize, with the European Space Agency, the United Nations Office for Outer Space Affairs and other United Nations bodies, an international Training Workshop on Microwave Remote Sensing Applications to promote the widespread application of this new technology. China is to supply the conference facilities as well as local travel expenses, together with board and lodging, for representatives from 20 developing countries.

At the same time, the Ministerial Conference on Space Applications for Development in the Economic and Social Commission for Asia and the Pacific (ESCAP) Region will be held in Beijing, China, from 19 to 24 September 1994. This will constitute an important activity in the implementation of the relevant United Nations recommendations from UNISPACE 2 as well as a significant event in the world of space applications. The Chinese delegation will separately give information regarding this conference. We shall welcome friends coming to Beijing to attend this conference, which we hope will achieve historic results.

The selection of "Space applications for disaster prevention, warning, mitigation and relief" as a theme for special attention by the Scientific and Technical Subcommittee at its 1994 session was an apt one. At present, the sudden eruption of natural disasters poses an enormous threat to the survival of mankind. China suffers annual losses amounting to several hundred million yuan due to such causes, and the Chinese Government attaches great importance to the utilization of advanced space technology to monitor, give warning, and evaluate relief needs in case of disaster. Short-term warning of impending earthquakes is an exceedingly difficult task. In recent years Chinese experts have achieved notable results by combining satellite remote sensing of infrared thermal anomalies with other technologies to explore and forecast imminent and approaching seismic events. Since 1990, 32 warnings have been issued, with results that give reason for optimism.

Recently China has been utilizing space and aeronautic remote sensing, including satellite and on-board synthetic aperture radar in combination with satellite communications, geographical information systems, the global satellite positioning system (GPS) and other advanced techniques to set up a national real-time monitoring and evaluation system of remote sensing for natural disasters. The branch system of on-board remote sensing real-time imaging propagation has been established, in-flight trials and adjustment of the entire system are at present under way; the system will be in full operation this year during the flood season.

As regards applications of satellite positioning techniques, GPS technology was successfully applied in the outskirts of Beijing last May to aeroplane utilization for the prevention of crop disease and insect pests over large areas.

At the invitation of the Office for Outer Space Affairs, Chinese specialists presented to the thirty-first session of the Scientific and Technical Subcommittee a technical report entitled "Monitoring desertification changes in China".

Sudden natural disasters constitute one of the gravest problems now besetting humanity. We must continue to make use of already-mastered advanced technologies to mitigate the damage caused by disasters.

The adoption of "Application of space technology for education with particular focus on its use in developing countries" as the theme for special attention at the 1995 session of the Scientific and Technical Subcommittee was a most necessary choice. China is actively striving to serve as host to the Asia-Pacific regional centre for space science and technology education, and has already started building preparations at the renowned Beijing University and the Wuhan Cartography Science and Technology University. Last May we had the honour of receiving in Beijing a group of experts sent by the United Nations to evaluate the project. We are ready to contribute our available resources and experience to develop regional education in space science and technology.

Remote sensing of the Earth by satellites, including, *inter alia*, applications for developing countries, is an extremely important matter. Considering that the remote sensing system is of particular value to environmental monitoring, resource investigation and disaster warning and evaluation, it is necessary to lay particular emphasis on compatibility between existing remote sensing satellites and future systems, together with their complementarity and continuity in data collection. At present, the price of satellite documentation is extremely high, seriously hindering widespread application in developing countries. The importance of supplying remote sensing data and analysis material openly, at a reasonable price and in a timely manner to all countries should be stressed. We agree to maintain the item on remote sensing of the Earth by satellites, including, *inter alia*, applications for developing countries, on the agenda, to be reviewed as a priority item at the next session.

The Chinese Government is greatly concerned with the issue of reducing debris generated by space activities. Outer space is a resource that is a part of the common heritage of mankind; its protection is our shared duty. While paying close attention to research and development trends on the international scene, the relevant Chinese institutions are also organizing Chinese specialists to develop effective research in this field. Their work currently involves mathematical-model research on space debris, the study of ways of reducing space debris and observation of debris production occurring through the launching of space objects by China and other countries. The Chinese Government supports continued research by experts in this field. We also endorse continued review of this agenda item by the Scientific and Technical Subcommittee.

The year 1994 witnessed the further development of China's space technology. We have successfully launched the SJ-4 scientific experimental satellite, and later this year will launch three international satellites - APSTAR 1, APSTAR 2 and OPTOS B-3 - and China's DFH-3 telecommunications satellite.

The components of China's fundamental policy of space technology development are strengthening international cooperation in science and technology on the basis of equality and mutual benefit, and the common exploitation and peaceful utilization of outer space. We hope to see the further expansion of such international cooperation under the impetus of the Programme on Space Applications.

Finally, I wish to express my appreciation for the efforts of Mr. Jasentuliyana, Director of the Office for Outer Space Affairs, and Mr. Abiodun, the Expert on Space Applications, to promote the Programme on Space Applications. I also thank the secretariat for the work it has done. We are convinced that under the Chairman's able leadership, and with the collective wisdom of all participants, this session will come to a successful conclusion.

Mr. Moutsoulas (Greece): My delegation congratulates you, Sir, upon your election to a vice-chairmanship of this Committee.

My delegation wishes to commend the Scientific and Technical Subcommittee for the work performed during its thirty-first session. Moreover, I should express my delegation's appreciation for the outstanding work which has been carried out by the Director of the Office for Outer Space Affairs, Mr. Jasentuliyana, and the Office's staff, as well as to the activities of the Expert on Space Applications, Mr. Abiodun.

I notice with satisfaction the inclusion of the item on space debris in the Scientific and Technical Subcommittee's report. More than 10 years have passed since we were warned on that issue by the representative of Czechoslovakia, Mr. Perek.

Another important issue included in the report of the Scientific and Technical Subcommittee is remote sensing of the Earth by satellites, a subject that is no longer an isolated technological discipline but rather part of a system which studies systematically complex problems of the Earth's environment with the support of a vast amount of information.

In past years, problems related to the Earth's environment were split into particular disciplines and treated separately. This was due to weaknesses in computer science. Recent progress of computer technology in computing speed and storage capacity permit the interdisciplinary study of problems. Land use and planning, geological mapping, soil erosion and degradation, as well as the results of forest fires, meteorological observations and pollution monitoring are no longer treated separately. All data obtained by remote-sensing methods are deposited into appropriately developed geographical information systems and studied in combination with supplementary information. Not only are these data combined but, through existing networks, computer programmes and the corresponding solutions are feasible.

Several universities have joined forces and established a post-graduate European course in land information surveying within the framework of the Erasmus Programme of the European Economic Community. These institutions include the Remote Sensing Laboratory of the University of Athens in Greece; the Laboratory for Regional Geography and Landscape Science of the University of Ghent in Belgium; the Institute for Geography and Computer Sciences of the Roskilde University Centre in Denmark; the Département de Géographie of the Université de Limoges in France; the Departemento de Geodinamica of the Universidad de Granada in Spain; the Departamento de Geografia e Planeamento Regional de Faculdade de Ciencias Socias e Humanes of the Universidade Nove de Lisboa in Portugal; the Physics Department of University College Dublin in Ireland; and the Department of Geography of the University of Reading in the United Kingdom. I hope that from this October another good university, an Austrian university, will be added to that list. Professor Ortner's advice on that matter is much appreciated.

In addition to the Erasmus scholarships which are offered for that course, the Greek Government is offering to nationals from Africa, Asia and Latin America state scholarships for post-graduate studies in Greece. Details of these will be available at the Office for Outer Space Affairs.

The second EUMETSAT Data Collection Platform Users Conference was held at the Eugenides Foundation on 14 to 17 September 1993. Sixty participants from 11 countries and 14 international organizations and societies took part in the Conference. The Eugenides Foundation cosponsored and hosted this activity, as it did the United Nations Workshop on Space Communications for Development held in May 1993, which was mentioned in yesterday's statement of the Expert on Space Applications and is referred to in paragraph 27 of the Scientific and Technical Subcommittee's report.

Greece's National Meteorological Service recently installed a high-resolution picture transmission system. A special interdisciplinary Working Group has been established, consisting of scientists and engineers representing governmental agencies and universities, in order to promote the full exploitation of the system. The Working Group will concentrate on meteorological applications, as well as sea-pollution monitoring, forest-fire risk assessment and so on. Moreover, this Working Group is in charge of the preparatory study for the Regional Centre for Space Science and Technology Education in Europe, which will specialize in the aforementioned subjects, as Greece proposed in its statement to this Committee.

Next month we will celebrate the twenty-fifth anniversary of the Apollo 11 landing. It should be mentioned, however, that preparations for that achievement were based on wide international cooperation. To give an example, years before the exploration of the Moon by spacecraft, its mapping began with telescopic observations, at the visual as well as the infrared part of the electromagnetic spectrum, from France's Observatoire du Pic-du-Midi, with a telescope given by the United States of America for the planning and support of the Apollo missions. We are proud that Greek astronomers took part in that international effort, which was led by the late professor Zdenek Kopal of the University of Manchester in England. Another example of fruitful international cooperation was the simulation flight of the French SPOT satellite. Four years before the satellite's flight, a Daedalus scanner was flown on the aircraft of the French Institut Géographique National over Messinia, in southern Greece, and its data were analysed by Greek scientists at the Joint Research Centre of the Commission of the European Communities. Since that time, the region of Messinia has become the testing ground for several remote-sensing experiments of the European Union. Greek scientists are now looking forward to continuing their research on the spectral signatures of typical Mediterranean landcover, in cooperation with the Instituto Nacional de Tecnica Aerospacial of Spain.

While numerous space research and application activities have been conducted in the framework of bilateral agreements of cooperation with European partners, additional and better coordinated ones are expected to be developed following next month's visit of the Director General of the European Space Agency (ESA), Mr. Luton, to Athens, about which the representative of ESA informed the Committee earlier this week.

In addition to Greece's European cooperation, and in view of the currently developing Cooperative Programme for European and United States Cooperation in Higher Education, a special programme has been initiated, with the participation of several university departments in Greece and the Carnegie Mellon University of Pittsburgh, on planning for the design of human environments. A Forum-Workshop devoted to this theme was held in Sparta in May, organized by the Sparta Institute, which is a joint venture of Greek institutions and the Carnegie Mellon University of the United States. This Forum addressed the potential for a project-based academic collaboration of scientists, engineers and artists to exploit jointly the emerging technologies and reconsider our *modus vivendi*.

What can different disciplines offer each other, and how can they benefit from each other in a cooperative workspace? Examples such as image-processing techniques - which are similarly used by geographers in space-borne remote sensing, physicians in CT scans, graphic designers in photoprocessing, robot programmers in object recognition, and so on - show that common languages develop across the sciences and arts through the use of common tools. Similarly, the fuzzy borders between geographic information systems, computer-aided design models, multimedia databases and virtual-reality productions prove that traditional distinctions inevitably fade in our rapidly and surprisingly evolving working environment.

Moreover, during that Forum, the potentialities of today's communication systems were demonstrated. The Sparta Institute was connected to the Science and Technology Library of Carnegie Mellon University through the Internet computer network and information was exchanged. It became apparent that, thanks to space communications, the knowledge and expertise of an institution of high standing is available anywhere in the world, even in the most otherwise isolated places.

That facility was originally developed in order to assist American students spending a semester of research work in Greece in keeping in touch with their home institution. It could, however, be used by any country as a model for development of a university campus of high standards, even in the most underprivileged area.

The strong belief and ideal of my country are that educational programmes should not be restricted by national boundaries. Everyone should be allowed to participate. Scientific competence and, at a global scale, a good understanding of today's problems might be an efficient way of smoothing differences and preparing the ground for a peaceful world. And, to that extent, one of the most respected universities of the world - Carnegie Mellon University of the United States - has set a good example.

Mr. Zvedre (Russian Federation) *(interpretation from Russian):* In our opinion, a retrospective review of the activities of the Scientific and Technical Subcommittee shows that a certain amount of success has been achieved on many issues. This success is due mainly to the clear structuring of our work, although its dynamic, nature, stage of advancement and rational order of planning tend to vary depending on the problem being addressed.

At the present session, it is necessary to strengthen and develop this trend and attempt to find general measures of interest and use to all. In its fullest scope, this might also involve dialogue related to the possible establishment of a new global space forum.

We feel that this is no simple matter and that we should resist dividing delegations into factions for and against it, into "progressive globalists" and skeptics who forsake the general interest. In the opinion of the Russian delegation, we must try to define the various points of view and to understand why, at its last session, the Subcommittee failed to reach a consensus on the convening of a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 3). For many, such a measure represents a radical way of creating new forms of integration and a good opportunity for making important progress in our apprehension of new ideas for exploiting space in the interests of humanity and enriching the practice of cooperation. To a certain extent, too, we would wish to clarify our restrained attitude to convening a new conference and to point out a few concrete realities.

We feel that it would not be entirely correct at the present stage to assert that there is an absolute need to convene such a conference. One reason is that the guidelines for cooperation established by the previous Conference remain relevant today. Systematizing experience, developing the practice of cooperation and making timely and justified corrections to the guidelines can be done within the framework of the Committee. Thus, before convening such a large-scale forum, it is important carefully to consider the possible ways and means to achieve the desired goals. Moreover, in principle we should define those goals that would be of interest to all the States concerned. Similarly obvious is the need to take into account the practical, global and legal aspects of problems that need to be addressed by any world space conference. In circumstances in which constructive work is being carried out within the Committee on many of those issues, the exacerbated emotions of the moment, elicited as a result of unreasonably high hopes for such an international forum, could significantly hamper the constructive tone of the Committee's work.

In the context of the constructive dialogue taking place in the Legal Subcommittee, it would be logical to appraise the results of its serious reconsideration of principles by taking into account interrelationships in the sphere of cooperation in order to assess the extent to which they can be adapted to the criteria and requirements of contemporary life. Such work would enable us to define with greater clarity the possible institutional characteristics and parameters of new ideas for international cooperation and its renewed priorities.

Our delegation would like to apprise the Committee of Russia's hopes to reactivate its space activities and its participation in space affairs in the coming years, especially through the United Nations Office for Outer Space Affairs and the Programme for Space Applications, by renewing our practice of participating in cooperative measures at the national level. In recent years, this participation has been somewhat curtailed by radical changes in the structure of our national management of space activities and our need to devote priority attention to reforms taking place in Russia's space industry.

The Russian delegation would like briefly to describe the current status of problems in nuclear safety and the radiation security of nuclear-power sources (NPS). We have had considerable experience in the utilization and development, first, of radiation-safety systems for reactor units in low Earth orbit and in the aerodynamic and explosive dispersion aspects of these units and, secondly, in other special elements in the construction of radio-isotopes for nuclear-power sources, ensuring radiation safety for all apparatuses in normal operational circumstances and in case of accident.

We now have a certain amount of understanding of safety questions, and the consequences of a possible collision of NPS with space debris, if such nuclear sources are located in space apparatus in long-term low orbit, or after the decommissioning of high-orbit apparatus. In view of the importance of publishing the results of research on safety questions relating to NPS, Russia is prepared to make available the relevant information and analysis materials on various aspects of the NPS problem to the Subcommittees.

Moreover, promising systems are being developed that would guarantee nuclear and radiation safety in the event of an accident involving NPS reactors.

In Russia we have found fairly acceptable technical solutions to the problem of ensuring the safety of NPS in space. These have been derived by the relevant sections of the Atomic Energy Ministry and the manufacturers of the systems. The further development of work along those lines should lead to an expansion of the range of NPS available and also in the choice of optimum solutions to safety problems.

The programme of work of safety problems takes into account the development of ways and means of ensuring the safety of NPS of different types: for supplying power to the apparatus of space vehicles, electrical reactors and nuclear-powered rocket engines. The aim of such development projects is the eventual harmonization of unified NPS safety systems that could meet the above-mentioned requirements at every stage of operation, including accidents encountered while entering orbit or being taken on board, or caused by collisions with space debris.

The Russian Atomic Energy Ministry, together with the United States energy authorities, has considered the standard-setting and technical documentation available in both countries to regulate the safety of NPS in outer space and to develop proposals to synthesize them.

The results of these developments will become apparent in the next few years, enabling us to go on to the discussion of proposals to review the principles governing the use of NPS and the formulation of new norms and standards and the revision and expansion of existing provisions. The delegation of the Russian Federation feels that bringing these principles together, as well as the IAEA document on extraordinary planning and preparation for the return of a satellite with a nuclear unit, which should be published towards the end of 1994, would be entirely adequate at this time, in the almost complete absence of NPS launchings. As to the energy sources already launched and in orbit at 800-1,000 kilometres, the consequences of any possible collision with space debris are also being studied. The results of our research fully confirm the safe outcome of any such event, as well as the remoteness of the possibility of accident. Within the framework of existing research on safety, we intend to analyse the space measures in force at the moment in order to remove from orbit any unsatisfactory NPS or to raise them to a higher orbit if necessary.

We welcome the fact that the Scientific and Technical Subcommittee has begun consideration of the problem of space debris and is studying ways of solving this problem on the basis of international cooperation, as well as seeking ways to continue research into this matter. The range of problems to be considered is extensive. It includes the observation and modelling of the formation and growth of pollution "clouds" in space and research into and determination of criteria and rational models of conduct in space, the systematization of ways and means of averting the worsening of pollution and ensuring the safety of space objects, as well as finding ways to lower the level of pollution.

In order to ensure an exchange of views on this matter, assessment of progress in problem solving and the quest for mutually acceptable measures to encourage the international community to resolve the problem of space debris, it would be useful if the results of the international interagency coordinating committee on the problem of space debris were presented to a session of the Scientific and Technical Subcommittee in synthesized form within the framework of special academic seminars. As to the matter of speeding up the international and legal settlement of these problems, we believe this would be premature without sufficient development of their scientific and technical aspects.

Mr. Suárez (Mexico) *(interpretation from Spanish)*: The report on the work of the Scientific and Technical Subcommittee at its thirty-first session (A/AC.105/571) reflects the status of the most important items covered during that session. My delegation believes, however, that in future the Subcommittee should submit reports that are more transparent rather than follow its traditional practice of indicating only the results of the debate or that there was opposition to some points, without specifying how the majority view in the Subcommittee might have changed. We believe that the current format - indicating only that no agreement was reached - favours pro forma statements while offering no incentive for negotiating processes that might result in substantive progress on points of common interest.

With respect to the substantive aspects of the report, my delegation reiterates its unwavering commitment to strengthening international cooperation in outer space. In this respect, it expresses once again its deep concern at the increasing imbalance in the various United Nations activities in this field and also at the meagre resources available to the United Nations Programme on Space Applications for experts from developing countries.

My delegation is very pleased to note that, in conformity with General Assembly resolution 48/39, the Scientific and Technical Subcommittee included the question of space debris on the agenda of its last session. The Subcommittee thus began consideration of its new item and considered the question of scientific research on space debris, including relevant studies, the elaboration of mathematical models and other analytical work relating to space debris environment. The Subcommittee also agreed that international cooperation was necessary to devise appropriate and viable strategies to minimize the possible consequences of such space debris.

My delegation is of the view that in future the Subcommittee should focus its attention on collecting and analysing data on space debris environment and on devising a plan of work. We therefore renew our request that this matter be placed on the agenda of the Legal Subcommittee and stress once again that its inclusion does not mean that the Scientific and Technical Subcommittee has exhausted its consideration of the matter, because advances are constantly being made in this field.

As my delegation stated in the course of the general exchange of views, Mexico is in favour of convening a third UNISPACE conference, because this would not only certainly give renewed impetus to the implementation of the recommendations of UNISPACE 2 but would also revitalize the work of the Committee. A number of delegations have cited the need for a clear definition of the objectives of such a conference. In this respect, we feel that the proposals made by the Scientific and Technical Subcommittee, including the viewpoints expressed by the Latin American and Caribbean Group, form a good and substantive basis for making headway on the issue at the current session. In the context of the unofficial discussions to be held this evening, we believe that the topic of a third UNISPACE conference should be considered as a specific item on the programme of work so as to ensure maximum transparency in our deliberations.

The Scientific and Technical Subcommittee gave priority to undertaking an overall examination of the question of the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space and of the United Nations Programme on Space Applications. In this context, the Subcommittee took note in its report of activities relating to an international space information service; studies; inter-institutional cooperation; and inter-regional cooperation mechanisms.

The Mexican delegation stresses the importance of strengthening long-term training and educational efforts, as well as those that, aside from being the object of greater international cooperation, are geared to the specific requirements of developing countries. Accordingly, my delegation deems it necessary to deepen and expand the studies on the utilization of low Earth orbit satellites for communications, for managing forest resources, for space applications aimed at sustainable development and for satellite-based broadcasting systems.

Mr. Timofeev (Russian Federation) *(interpretation from Russian):* The Russian delegation has noted with satisfaction the progress achieved in the course of the Subcommittee's work during the last session. However, a number of serious and important problems still exist that will require heightened attention on our part in the future stages of our work. One of these is the question of regulating the use of the geostationary satellite orbit, the unique characteristics of which give it exceptional importance in the creation of national and international satellite communication systems for television and radio broadcasting, data transmission and so on.

The rapid increase in the number of different satellite systems in geostationary orbit, together with the latter's limited capacity, has resulted in some concern with respect to the future use of such orbits. The Russian delegation would once again emphasize that the geostationary satellite orbit, as part of outer space, can only be the common heritage of the inhabitants of Earth and must be used in strict accordance with agreements adopted by the international community.

At the same time, it should be borne in mind that over the course of more than three decades, the practical questions having to do with the scientific, technical and the international legal regulation of the use of radio frequency spectrums for various satellite systems have been handled by the United Nations specialized agencies, and in particular by the International Telecommunication Union (ITU). The ITU attaches special importance to the problem of ensuring just and equitable access to the geostationary satellite orbit by all countries, irrespective of when their satellite systems become operational.

It is no happenstance that in the new Constitution of the ITU, which goes into force on 1 July 1994, a special article - article 44 - entitled "The use of the radiofrequency spectrum and the geostationary satellite orbit", has been introduced. In paragraph 196 of this article it is stated:

> "In using frequency bands for radio communication, the members of the ITU should consider that radio frequencies and the orbits of geostationary satellites are a finite natural resource, which is to be used rationally, efficiently, and economically, in accordance with the provisions of the radio regulations, so as to ensure equitable access to this orbit and to these frequencies on the part of various countries and groups of countries, with due consideration for the special requirements of developing countries and the geographic location of various countries. The implementation of these principles is ensured by the provisions of the radio regulations, which comprise detailed rules and procedures for the use of frequencies and orbits."

Two approaches have emerged in this regard: the gradual increase in the number of systems with the implementation of international coordination of procedures - in other words, the evolutionary increase of the orbital load to meet current user requirements and needs; and the development of international a priori plans for the use of individual frequency ranges to ensure meeting coming needs of countries, irrespective of the onset time of system operations. Successful examples of such plans are, for example, the satellite TV broadcast plans for 1977 and 1983, as well as the satellite communications plans for 1988.

Both approaches have their pros and cons. However, we can note - and this is something that is based on practical results - that on the basis of collective efforts in the course of its ever so many conferences the ITU has been able to strike a balanced global approach, allowing for the meeting of everyday needs at present through international coordination procedures, and at the same time guaranteeing future access to the orbit and spectrum as inscribed in international plans.

Now given the above, and taking into consideration the fact that it is necessary at future stages of our work to continue study of the very important problems relating to the regulation of the use of the geostationary satellite orbit, we would like to propose that there be clearer delimitation of the tasks that are taken before our Committee and before the ITU, so that there will be an avoidance of parallel work and of duplication of efforts in discussing practical proposals that have already been taken up by the international community in another forum.

Apart from this, it would probably be useful, for the purpose of progress in future discussions in our Committee, that the International Telecommunication Union, in its annual report to the Committee, also provide information on the very latest regulatory decisions, ensuring just and equitable access to the geostationary satellite orbit; this should be factored into the process of discussion, especially in our Legal Subcommittee.

The Russian delegation attaches exceptional importance to the problem of the regulation of the use of the geostationary satellite orbit and is ready to continue its active participation in resolving this problem in our Subcommittee.

The Chairman: We have concluded our joint consideration of agenda items 5 and 7.

Report of the Legal Subcommittee on the work of its thirty-third session

Mr. Lessard (Canada): My delegation has read with interest the report of the Subcommittee and is in general agreement with its description of the matters raised during the debates, as well as with the conclusions reached by the Subcommittee. I would like, however, to take a few minutes to state in more detail the Canadian position with respect to a few of the items mentioned in the report.

First, on the issue of the early review and possible revision of the principles relating to the use of nuclear power sources in space, as explained in a previous statement, Canada was very pleased that 14 years of often challenging discussions finally led, in 1992, to the adoption by the United Nations General Assembly, by way of consensus, of a set of principles on this question. Canada agrees with the continued consideration of this matter in the context of the Scientific and Technical Subcommittee, and my delegation intends to contribute to a fruitful discussion on this question at future sessions. We also believe that a comprehensive review of the principles in the Legal Subcommittee should await a sound scientific and technical basis for such review. Until such time, the integrity of the existing principles should be preserved.

With respect to the combined topics of the definition and delimitation of outer space, as well as of the character and utilization of the geostationary orbit and its rational and equitable use, my delegation tends to agree with the prior comments of the delegation of the Czech Republic that these two issues are not inevitably and obviously related and therefore do not need to be considered together. Beyond this initial remark, we note that the issue of the definition of outer space has been discussed by the Legal Subcommittee for many years, without measurable progress towards a common understanding. We believe that a precise delimitation has not proven essential in the context of the practice of States up to now, and we suggest that a concrete demonstration of the need in the future for such a delimitation, in the context of new technologies or space systems, is required. In the absence of a rejuvenated and reoriented debate on this matter resulting from such a demonstration, my delegation believes that minimal or no time should be allocated to this particular issue at future sessions.

As concerns the geostationary orbit, our position, as expressed in a prior statement, is that this matter is appropriately dealt with in the context of the International Telecommunication Union, with specific reference to the relevant sections of the ITU Constitution and Convention, and specifically, as mentioned by the previous speaker, article 44 of the ITU Constitution, which mentions the need for all states to use the geostationary orbit rationally, efficiently, and economically, guaranteeing equitable access to all. We also believe that claims of State rights to the geostationary orbit on the basis of geographical location are not allowed under international space law, with specific reference to article II of the 1967 Outer Space Treaty.

Let us now consider the topic of the legal aspects of the principle that the exploration and use of outer space should be carried out for the benefit and in the interests of all States, with particular reference to the needs of developing countries. Canada finds itself in full agreement with this principle, which was codified in the Outer Space Treaty and prior resolutions of the General Assembly, and which was further elaborated in other international instruments. My delegation believes that the most effective way to achieve this end is for States to de facto implement international space cooperation to the widest possible extent. The principle of international cooperation is a basic tenet of the Canadian space programme, as so much of what we do is based on cooperative efforts. This is true also of our longstanding and fruitful activities in cooperation with many developing countries, as illustrated by my earlier statement today, which provided several examples of such collaborative projects in the fields of telecommunications and remote sensing. We believe this approach offers the best flexibility in terms of responding to the abilities of some States and the needs of others, and does not make it necessary to formalize the terms of the cooperation.

Finally, let me say a few words on space debris. As noted before, Canada was heartened by the progress made at the Scientific and Technical Subcommittee in obtaining consensus on the future development of a specific and deliberate multi-year work plan. We intend to contribute to this exercise and believe that sufficient, albeit limited, time should be allowed for this effort, along with other national and international efforts, sufficiently to fill the gaps in the existing scientific and technical knowledge about the environment, risks and possible remedial measures associated with space debris, including a cost-benefit analysis. Until such time, we believe it is premature for a formal discussion on this item to begin in the Legal Subcommittee.

Mr. Chandrasekhar (India): Ever since the beginning of the space age, activities related to the exploration and peaceful use of outer space have been progressing at a rapid pace. Progressively, more and more countries depend upon the use of outer space in seeking a rapid solution to their problems in telecommunications, natural resources management, environmental monitoring and several other needs. International cooperation in all these activities assumes great importance, due to the very nature of activities in outer space, in terms of their technological, economic, legal and spatial dimensions. The various treaties evolved by our Committee through the Legal Subcommittee in the past form an important foundation for supporting, guiding, and regulating the activities of various States in this field, and also for promoting international cooperation. As space technology is continuously developing and uses of outer space are diversifying, it is important to pursue further development of space law by building upon the strong foundation laid in the past.

In the opinion of our delegation, several areas merit consideration for the further elaboration and extension of international space law. These include, for example, specific measures for preservation of the space environment; elaboration of principles to facilitate equitable use of space resources, including measures for their conservation to be used by future generations; and international principles for trade and transfer of technological and material resources pertaining to peaceful uses of outer space. Other developments in international space law are also needed, particularly to reconcile the rapid developments in space applications with the security and sovereignty concerns of States. The delimitation of outer space and the principles for dissemination of very high-resolution data and information gathered from aerospace systems are examples. As our experience demonstrates, the lead times for evolving international legal frameworks are very long, and it would be appropriate for the Committee to consider appropriate studies and exchanges of information relating to such potential agenda items.

Let me now revert to the work of the Legal Subcommittee at its thirty-third session. Our delegation is pleased to note, on the positive side, a further useful exchange of views among various delegations. Given the complexity of various items that are being dealt with in the Subcommittee, progress has been slow. However, our delegation hopes to see speedier progress.

On the question related to the revision of Principles guiding the use of nuclear power sources in outer space, our delegation notes that the relevant working group in the Legal Subcommittee recommended the suspension of its work during 1995, pending the results of the work of the Scientific and Technical Subcommittee. Our delegation would like to reiterate that the Principles already adopted by consensus in the General Assembly should be implemented until such time as revisions are agreed upon. We believe that the clear scope of revisions should be agreed upon before we actually take up the revisions. In the opinion of our delegation, reviews or revisions should be essentially to bring the Principles into line with the evolution of relevant international standards such as the ICRP guidelines, which were used as a basis to evolve the criteria for safe use. The revisions should be geared towards the goal of strengthening the level of safety provided by the Principles.

Turning to the agenda item related to the definition and delimitation of outer space and the geostationary orbit (GSO), we note that it has been under consideration for a long time but has eluded agreement in the Subcommittee. Our delegation has always considered the definition and delimitation of outer space to be necessary, taking into account the rapidity of technological development and new ways of using technology. On this subject, we welcome the efforts in the Legal Subcommittee to examine the characteristics of aerospace systems and their relation to outer space from the legal viewpoint. However, we note that some fundamental questions remain unresolved, and we hope that they will be addressed and resolved in the future.

Our delegation also believes that progress on the subject of the GSO is important. In this respect, we were pleased to note the further productive exchange of news on the working paper submitted by the delegation of Colombia. Our delegation has always considered that the GSO is a part of outer space, and we believe there is a need to evolve further legal frameworks without prejudice to the role of the ITU in ensuring, in practice, an equitable, rational, and efficient use of the GSO, taking into account the needs of all States, particularly those that have had no access so far or that have greater development needs still to be fulfilled. We hope to see further progress on this question.

With regard to the item on outer space benefits, our delegation notes with satisfaction that there have been useful exchanges of views, positions, and concerns by various delegations. In relation to this item, we would like to stress two points. We attach great importance to the principles declared in the Outer Space Treaty that outer space is the province of all mankind and that the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development. Hence, we attach great importance to ensuring unhindered access to international cooperation on the peaceful uses of outer space.

Secondly, international measures to encourage and assist the development of indigenous capabilities for implementing space applications for peaceful and beneficial uses should be recognized, because the effective implementation of space applications depends on an appropriate degree of indigenous technological skills. The development of indigenous capabilities is necessary in many developing countries to serve their interests through appropriate use of technology to meet their particular needs and priorities, maintaining the continuity of services and deriving economic benefits. We hope that the various concerns and views expressed in relation to the working paper under discussion in the Legal Subcommittee are useful in further evolving a common understanding and making progress.

Finally, we wish to place on record our appreciation of the Chairmen of the three Working Groups: Mr. Franz Cede of Austria, Mr. Estanislao Zawels of Argentina, and Mr. Raimundo González of Chile for their able guidance.

Mr. El Ghernougui (Morocco) *(interpretation from Arabic):* My delegation would like at the outset to thank the Secretariat for the excellent work it has done with regard to this item. I should also like to take this opportunity to express our satisfaction with the work of the Legal Subcommittee, which will have a positive effect on the future deliberations of this Committee.

There has been very rapid evolution in outer space activities, with many developments. Space technology is improving very quickly, and this will be beneficial to mankind as we find applications to activities on Earth.

This prompts us to consider the establishment of legal structures to govern the evolution of space science. We will also be able to strike a relative balance between international law as it governs both the use of outer space and other fields. The use of nuclear power sources in outer space has two aspects. Its utilization could be beneficial in, for example, the economic, scientific and social fields; but at the same time we feel it is also fraught with danger.

Accordingly, we have to think carefully about establishing new norms and principles to deal effectively with space technology, and ponder on whether or not we need to use nuclear power sources in space. It is therefore incumbent upon us to adopt new strategies and procedures for examining other means which may be less dangerous and more effective in the achievement of our objectives as we consider whether we really need to use nuclear power sources in outer space.

Enhancing and expanding the role of space science and technology, especially when the geostationary orbit is involved, is very important in view of their positive impact on economic, social and cultural developments, especially in developing countries.

Since the geostationary orbit is a limited natural resource, we must ensure its equitable use, taking into account the present and future needs of developing countries. Hence we believe that it is important to develop a legal framework governing activities in the geostationary orbit in order to ensure its efficient and effective utilization, taking particular account of the needs and interests of all countries.

We need to cooperate in the search for new solutions that take due account of the interests of all countries, and not only those of a few. We should not venture into outer space without first considering how we can compensate countries that do not possess the technology needed to enjoy its benefits. Of course, the developed countries, which have advanced science and technology that enables them to use outer space, derive benefits from it. It is only natural that we should ask those countries to contribute to a fund to be used to carry out development projects in the developing countries enabling them to improve their television and telephone networks. This would constitute firm evidence that we were using outer space for peaceful purposes and for the benefit of all mankind without discrimination. We would thus consolidate international cooperation, leading to new areas of cooperation in the future.

The discussions that have taken place on the legal aspects of this matter have led to some important developments. Following a number of meetings and intensive discussions, new trends have emerged and we seem to be approaching consensus. It is therefore important that we now seize the opportunity opening up from these new trends, for they point the way towards genuine consensus and an equitable agreement.

The utilization of outer space for peaceful purposes is possible only through the kind of international cooperation that takes into account the interests of all countries. Indeed, experience has shown that there can be no scientific and technological progress in the economic, social and cultural fields unless we are able to consolidate and strengthen cooperation for the benefit of all countries. For this reason, and in the light of new developments, I think it has become important that a new legal framework be established that would take into account all of these recent developments as well as the question of international cooperation.

In pursuing our objective of the peaceful utilization of outer space, we must try to reconcile divergent national interests and concerns. Therefore, the participation of the developing countries in outer space projects has taken on additional importance. An atmosphere of cooperation must be created between the developed and the developing countries, regardless of their achievements in the field of space technology.

The meeting rose at 12.05 p.m.

United Nations A/AC.105/PV.401

General Assembly Official Records

Committee on the Peaceful Uses of Outer Space

401st Meeting

Monday, 13 June 1994, 10 a.m.
Vienna

Chairman: Mr. Hohenfellner . . . . (Austria)

The meeting was called to order at 10.10 a.m.

Report of the Scientific and Technical Subcommittee on the work of its thirty-first session (A/AC.105/571) *(continued)*

Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space *(continued)*

Mr. Pesci-Bourel (Argentina) *(interpretation from Spanish)*: The Argentine delegation was an active participant in the last session of the Scientific and Technical Subcommittee, and approved the final report. Without wishing to repeat the points made then, we would like briefly to refer to the most salient items on the Subcommittee's agenda.

I begin with the issue of space debris, an item that Argentina and other countries wished to have included on the Subcommittee's agenda, and that was finally added to the agenda during the forty-eighth session of the General Assembly. We welcome that fact that we are working on this topic, which is particularly relevant with respect to geostationary satellites, because theirs is the most used orbit. If current trends continue, there is a risk of its being saturated in the near future, given the large number of active and obsolete satellites, as well as other space debris, in that orbit.

We consider it important that the Scientific and Technical Subcommittee should begin examining scientific research relating to space debris, including relevant studies, mathematical modelling and other analytical work on the characterization of the space debris environment. We therefore support the initiative of the delegation of Germany at our last session aimed at adopting a three-stage plan to deal with this issue.

With regard to the Programme on Space Applications, my delegation would like to begin by expressing our thanks to the Expert on Space Applications, Mr. Abiodun, for his detailed report on the Programme's activities. We are sure that his tireless efforts will make it possible for us to make significant progress during the coming year.

We would also like to commend the valuable courses and seminars held during 1993. We consider them to be essential for the dissemination of space knowledge, technology and experience to all States, particularly the developing countries.

My delegation wishes to refer especially to the initiative with regard to setting up regional centres for space science and technology education. The Government of Argentina is following their establishment very closely and with great interest, and we welcome the progress achieved by the Office of Outer Space Affairs and the Governments of Brazil and Mexico on setting up a centre for the Latin America and Caribbean region. My delegation would like to reiterate the interest of the Argentine Republic in participating in the activities planned for this regional centre. We hope that it will be possible to establish a branch in Argentina.

Finally, we would like briefly to refer to the possible convening of a third UNISPACE conference. At the last session of the Scientific and Technical Subcommittee we

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had the opportunity to initiate a very fruitful and extensive dialogue with other delegations. The document submitted by the Secretariat on this issue is a useful basis for work in this Committee. However, we believe that it is necessary to deal in more depth with matters of timing, goals, agenda, organization and venue before we decide to convene such a conference. The first two UNISPACE conferences showed how important and necessary they were, but we cannot run the risk, by taking hasty decisions, of convening a third such conference without the proper foundation and the essential elements. That would be inexcusable, since we would be destroying the credibility and reputation of this type of conference. We shall therefore make every effort to avoid running this risk.

Mr. Tremayne-Smith (United Kingdom): I would like to thank the Scientific and Technical Subcommittee for its work over the past year and to touch briefly on some of the subjects covered in its report on its thirty-first session.

The importance of placing the item on space debris on the agenda should not be underestimated. We are therefore pleased at the progress made as a first step in understanding the full extent of the problem. The United Kingdom and colleagues in the European Space Agency (ESA) intend to continue their activity in this area, and are planning to better coordinate their research efforts. However, the work undertaken so far is only a preliminary step, and it would seem somewhat premature to refer the issue of space debris to the Legal Subcommittee at this time.

The use of nuclear power sources in outer space has been, and will continue to be, the subject of important research. We advocate the further consideration of the safe use of this energy source, and particularly the consideration of the interaction with space debris. We recognize the considerable achievement of agreeing upon the set of Principles after many years of negotiation, and have sought to contribute constructively to the debate on this issue. In the absence of overriding technical or operational reasons, a review of the Principles is unnecessary at this time, and the integrity of the current Principles should be maintained.

My delegation has queried the need for a further UNISPACE conference, particularly before the full ramifications of such an event, and possible alternatives, have been fully considered. While the first Conference placed its main emphasis on the utilization of space, the second UNISPACE conference raised more contentious issues, and continues to influence the meetings of this Committee. So the issue, perhaps, becomes more a matter of considering the aims and objectives first, rather than agreeing to hold a conference and then deciding what that conference should be about. In addition, when we make a decision we need to have to hand the fullest information on previous activities and alternatives. If a third UNISPACE conference is to be held, it should be of benefit to all members of COPUOS and to the United Nations in general.

Mr. Wiryosumarto (Indonesia): Before making my brief remarks concerning the items under consideration, allow me to express my appreciation to the secretariat for its commendable work in preparing document A/AC.105/571, "Report of the Scientific and Technical Subcommittee on the work of its thirty-first session". I also note with satisfaction that, in response to the request of the Scientific and Technical Subcommittee, the secretariat has submitted document A/AC.105/575 on matters related to the possible holding of a Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space. My delegation would also like to express its appreciation for the statement of Mr. Abiodun, the United Nations Expert on Space Applications, regarding these two items.

As we are all aware, during its thirty-first session the Scientific and Technical Subcommittee considered various items, and heard a number of interesting presentations on a number of topics related to its agenda. The Subcommittee, in accordance with General Assembly resolution 48/39, also continued its consideration of two important items, namely "United Nations Programme on Space Application and the coordination of space activities within the United Nations system" and "Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82)".

My delegation shares the view that it is a matter of urgency to implement the following recommendations of the Subcommittee. First, all countries should have the opportunity to use the techniques resulting from medical studies in space. Secondly, data banks at the national and regional levels should be strengthened and expanded, and an international space information service should be established to function as a coordination centre. Thirdly, the United Nations should support the creation of adequate training centres at the regional level, linked whenever possible to institutions implementing space programmes; necessary funding for the development of such centres should be made available through financial institutions. Fourthly, the United Nations should organize a fellowship programme through which selected graduates or post-graduates from developing countries would get in-depth, long-term exposure to space technology and its applications; it would also be desirable to encourage the availability of opportunities for such exposure on other bilateral and multilateral bases outside the United Nations system.

As regards the topic entitled "Matters related to remote sensing of the Earth by satellites, including, *inter alia*, applications for developing countries", my delegation wishes to reiterate its view that commercialization and privatization in the field of remote sensing, although it is necessary to update facilities as required, should not limit access to space remote sensing data and information. While supporting the view of the Subcommittee on the need to maintain access of developing countries to satellite data, my delegation is of the view that the sovereignty of States in the provision of data and information should be respected - in particular, the provision of natural-resources data and information.

Indonesian efforts and activities in this field are aimed at providing objective, accurate and timely information for a wide spectrum of needs and applications. In this respect, my delegation happily informs the Committee that since 1970 Indonesia has operated remote-sensing ground stations in Jakarta and Biak to receive data from LANDSAT and NOAA satellites. To anticipate rapid advances in remote sensing technology, last September the Indonesian Government commissioned its second-generation remote sensing ground station at Pare-Pare, South Sulawesi. The station is now able to receive data and process information from the SPOT, LANDSAT 5 and ERS-I SAR satellites, which cover a wide area including part of the Philippines, Papua New Guinea, Brunei Darussalam, Malaysia, Australia and Singapore. In cooperation with the National Space Development Agency of Japan (NASDA), Indonesia is planning to increase the ability of this station in receiving data, including those from ERS-I, next year.

As to regional activities, Indonesia has actively participated since last year in the joint project of the European Union and the Association of South-East Asian Nations in the utilization of the ERS-I satellite for land-use studies. Indonesia is also offering a training programme on value-added processes with respect to remote sensing of tropical data and is also responsible for a project on the impact of rising sea levels on coastal ecosystems, coordinated by the International Geosphere-Biosphere Programme and the South East Asian Regional Committee of START, generally known as SARCS. In collaboration with NASDA and the Economic and Social Commission for Asia and the Pacific (ESCAP), Indonesia is co-sponsoring a regional seminar on remote sensing for tropical ecosystem management, which will be convened in Bali in August this year. We expect many delegations from various countries to attend the conference. In this regard, we would like to take this opportunity to invite interested member countries to participate.

As we are all aware, ESCAP is preparing a ministerial meeting to be convened in Beijing in September this year. In fact, its preparation was commenced last year with a meeting of a group of experts, followed by a meeting of the consultative group in Bangkok last March. The outcome of the meetings was reported to the fiftieth annual session of ESCAP, held in New Delhi last April. It is the view of my delegation that the Scientific and Technical Subcommittee should take this opportunity to consider the report, particularly the portions concerning the applications of space technology, which could also be of benefit to other regions.

Matters of great concern to my delegation, among others, are the threat of the nuclear contamination of our fragile ecology through the re-entry of space debris, and the possibility of collisions between space debris and satellites. My delegation is therefore happy that the subject of space debris has been included in the substantive agenda of the last session of the Scientific and Technical Subcommittee. We urge that assessment studies of debris hazards be undertaken, as well as methods devised to overcome or reduce their effects. We would like to propose that studies be made to identify and define the legal aspects of the problem and that the results of all these studies, as well as all relevant information on space debris, be distributed to all Member States.

In our statement during the general exchange of views, we indicated - and would like to reiterate now - our support for the convening of the Third Conference on the Peaceful Uses of Outer Space (UNISPACE 3) in the near future in one of the developing countries. It is my delegation's view that this Conference would be a valuable forum in which to address the concerns of many States regarding the need to ensure continuity in space systems, particularly those related to meteorology and remote sensing.

Ms. Zheng Lizhong (China) *(interpretation from Chinese):* Concerning agenda item 7, "Implementation of the recommendations of UNISPACE 2", I am very honoured today to present to the Committee information on the preparation of the Ministerial Conference on Space Applications for Development in the Economic and Social Commission for Asia and the Pacific (ESCAP) region.

At the forty-ninth session of the annual meeting of the ESCAP Commission, it was decided that the Ministerial Conference on Space Applications for Development in the ESCAP Region would be held in Beijing in September 1994. That decision testifies to the confidence placed in us by the countries of the ESCAP region. The Chinese Government accords great importance to this Conference and has allocated special funds as well as manpower to its preparation.

At present, China has set up a Chinese Preparatory Committee, composed of leaders from 15 ministries and commissions, including the State Science and Technology Commission, the Ministry of Foreign Affairs, the Ministry of Finance, the Commission of Science, Technology and Industry for National Defence, the National Space Administration, Academia Sinica and others. Its honorary Chairmen are the Vice-Premier and Foreign Minister, Mr. Qian Qichen, and the State Councillor and Director of the State Science and Technology Commission, Mr. Song Jian.

The Asia-Pacific region covers a little less than 30 per cent of the Earth's surface, but sustains 58 per cent of the world's population. The developing countries of this region are faced with a series of grave problems, such as lack of resources, deterioration of the environment, frequent natural disasters, and a population explosion. At the same time, several countries have already invested huge sums of money to exploit space technologies and applications, and have achieved encouraging results. These advanced technologies, when applied to the exploitation of resources and the monitoring of the environment and of disasters, as well as satellite education, can constitute extremely effective means of promotion of social development. Consequently, the intensive utilization of advanced technology to solve problems affecting the human environment and to improve living conditions is an issue of great concern for the decision-makers of all countries, including those of the Asia-Pacific region. That the Asia-Pacific region should take the lead among the world's regions in convening such a high-level conference on space applications for development testifies to the growing numbers of leaders who attach importance to utilizing sophisticated and innovative technology to promote social development and to harmonize the resolution of regional problems in the process of development.

The Chinese Government would like to express its appreciation of this trend. The Conference will be an event of great significance for the Asia-Pacific region and of major importance in the field of space applications.

The coming Ministerial Conference is the first of its kind devoted to the topic of space applications activities to be held at such a high level in the Asia-Pacific region. Its purpose is to launch a regional space applications programme which would help the development of the ESCAP region. The objective of the programme is to promote regional and subregional cooperation, to strengthen and enhance space applications for sustainable development in the countries concerned and to ensure and maintain coordination in the development of space applications, and in this way to solve the environmental and developmental problems confronting the region.

According to arrangements made by ESCAP, the Conference activities will consist of the following four parts: first, the meeting of Ministers; secondly, the preparatory meeting of senior officials; thirdly, a symposium on space technology and applications for sustainable development and, fourthly, an exhibition on space technology and applications.

The ESCAP secretariat has prepared the following important documents for the meeting of the Ministers. First, there is the Ministerial Declaration - that is, the Beijing Declaration on Space Applications for Development in the ESCAP region. The Declaration will reflect the commitments made by the Asian Pacific countries to the implementation of the space applications programme, including their commitment in terms of financing and action with a view to ensuring the sustainable exploitation of natural resources and environmental management, and to the promotion of social and economic development.

The remaining documents concern the following topics: the status of and future trends in space technology in relation to sustainable development in the ESCAP region; issues concerning space technology and applications for sustainable development in the ESCAP region; the strategy for regional cooperation on space applications for sustainable development in the ESCAP region; and an action plan on space applications for sustainable development in the ESCAP region.

Invitations to the meeting of Ministers and the preparatory meeting of senior officials will go to Ministers and senior officials from 58 member States and associate member States.

I should like further to state that the activities of the Ministerial Conference will include an expert meeting on space technology and applications for sustainable development. Its main topics of discussion will include the following four themes: the development of space technology; geostationary observation; environmental and disaster monitoring; and satellite communications and other issues.

During the Conference, arrangements will be made to visit the relevant space agencies in China. Delegates will also be invited to participate in the meeting of Ministers and the meeting of senior officials, as well as related activities. The Conference will provide excellent opportunities for delegates to hold bilateral and multilateral talks.

The Ministerial Conference will feature an Exhibition on Space Technology and Application. Various countries and relevant international organizations, as well as corporations and commercial and industrial firms, will be able to take this opportunity to display their technologies and products. Through this channel, interested countries will be able to look for products they need as well as for channels of cooperation.

To ensure the smooth convening of the Conference, China has carried out a series of preparatory activities. It will provide international travel and per diem expenses for the team of 54 ESCAP Secretariat staff members and for Ministers from 13 least-developed countries. In addition, we will provide as the venue for the conference the China Hotel in the World Trade Centre complex, which was also the venue of the forty-eighth ESCAP session.

The Chinese Government will honour all the commitments it has made for the conference. We look forward to meeting friends from the Asia-Pacific countries in Beijing this September. We hope that friends from other parts of the world will also participate in the events, including the expert meeting and the Exhibition.

I am certain that with joint efforts and strong support from all sides, this unprecedented Ministerial Conference on Space Applications for Development in the ESCAP Region will be crowned with success.

The Chairman: We have now concluded consideration of agenda items 5 and 7.

Agenda item 6 *(continued)*

Report of the Legal Subcommittee on the work of its thirty-third session (A/AC.105/573)

Mr. Barsegov (Russian Federation) *(interpretation from Russian):* The delegation of the Russian Federation, on its own behalf and on behalf of many of our colleagues here and members of the Secretariat, would like most sincerely to thank you, Sir, and, through you, the Ministry of Foreign Affairs of Austria, the Government and representatives of Styria, the Mayor of the town of Graz and the representative of Austria for our excellent trip to Graz and our visit to Riegesburg castle. It is an exceptionally interesting historical place, and visiting it enabled us to become even better acquainted with the beauty of Austria and with its very friendly people.

We are convinced that the Legal Subcommittee remains one of the most important - even unique - forums for discussing new ideas, highlighting justifications for regulating space activity, developing the legal norms governing relations between States and responding to changing international conditions and requirements.

In the conditions prevailing in the contemporary world, the development of international outer space law requires a balanced approach in order to define ways and means of achieving our objectives. Here, even more than in any other forum, we can tolerate no bias, self-centred approaches or deviation from balanced solutions.

At first glance, it might seem that during the course of the Subcommittee's work no radical changes took place. Nevertheless, the ideas and proposals put forward - and, in particular, some emerging discussions - give us grounds for feeling that the session was not exactly commonplace. As the representative of a delegation whose position is based on a balance between interests and on openness, I should like to point out that a real movement has developed towards reaching constructive goals, with consequent continuous improvement of the international legal regulation of outer-space activity as a whole. The delegation of the Russian Federation is in favour of shifting the emphasis of some aspects of our discussion to individual items on the agenda, as well as in the general direction of the further international legal regulation of space activity.

Let us take as an example the development of international cooperation. In its work on new principles for cooperation, the Subcommittee, without predetermining the results of a comprehensive analysis and reworking the whole complex of ideas, needs to calculate properly well-founded parameters for generally acceptable solutions, taking into account practical interests and real conditions. Only such a model of further development with regard to cooperation, a model that could be put into practice for the benefit of all and that would continually be enriched by this practice, would work from the point of view of national and international interests.

In trying to improve our work with regard to activities in outer space, we must remember that outer space comes within the concept of "the common heritage of mankind", as developed in the United Nations Convention on the Law of the Sea. As is well known, the seabed and its resources beyond the limits of national jurisdiction were stated to be the common heritage of mankind. In developing the concept and its specific principles and norms, the participants in the Third United Nations Conference on the Law of the Sea felt that they should be a model to be applied to other resources and areas of general use.

The basic idea - the use of space and its resources in the interests of all mankind, with special account taken of the interests of developing countries - is very attractive and progressive from the point of view of general concepts about the best way of regulating things for mankind. At the same time, when it comes to such practical aspects as financing or the transfer of technology, it has given rise to great difficulties in contemporary international economic relations.

The Convention, section XII of which embodies the principle to which I have referred, was adopted by a majority of votes, but it took 13 years before it entered into force last November, with the minimum number of required ratifications. Thus, the text must be adapted to real conditions in order to make the Convention acceptable to those States without whose participation any formally established system cannot exist. Therefore, the call to adopt the basic principles and norms of the concept would objectively yield little of constructive benefit.

The specific nature of space activity entails the need for even greater caution and a very thorough assessment of real possibilities. A well-known figure once said "State the facts and the ideas will follow". Following upon this aphorism, we suggested at the session that developing countries with some potential in the sphere of outer space and related aspects of technology should give a precise, practical outline of a model that they envisage for access to outer space activities, an outline corresponding to the substance of the principles proposed - expressed in such categories as services, preferences, redistribution of benefits and so on - and ensuring a material basis for translating this model into reality.

In suggesting this, we are counting on the interest and readiness of colleagues to address the inadequate formulation of certain aspects of cooperation and how to correct it. We feel that the participants in the next session will be in a position successfully to continue the constructive work done on the analysis of issues to be addressed in the principles for cooperation.

I should now like to speak on another agenda item. We must note that, in the discussion on delimitation, there has typically been a clash between two different approaches. Some delegations hold the opinion that delimitation is necessary, while others make it clear that in no proposal can they find the least hint of rationality. In such circumstances, it is of course difficult, but not impossible, to achieve consensus. In order to be better able to deal with the problem of delimitation at this stage and to assess the real potential for adapting new approaches to the new international conditions, it was originally proposed that we address the problems of aerospace resources.

The discussion at this session has shown that the general ideas and key elements prepared by the Chairman of the Working Group on the questionnaire on aerospace objects met with the interest of many delegations. We believe that there emerged an understanding at this session that next year it will be necessary to renew and prepare a final version of the questionnaire, if possible one which is formulated more clearly and oriented towards more practical matters.

The position of the Russian delegation on delimitation is based on a dual approach: on the one hand, the continuation of the principled course, for the problem, as we see it, does indeed exist; and, on the other, a willingness to seek new approaches and potential solutions. It is precisely for this reason that we feel that, if there is a certain flexibility on subjects and in discussions, we can find a new approach to the consideration of this problem and, possibly, an acceptable alternative solution.

Concerning the geostationary orbit, we spoke during the session of the Subcommittee in favour of the Colombian document as a constructive key, taking into account first the general political importance of the tendency to move away from the consideration of the problem of the "equatorial dimension". This document represents a genuine step forward, but the shift of emphasis does not yet imply that we have found an optimum, generally acceptable solution embodied in international legal forms. In the context of the difficult ongoing journey towards an objective truth, we should like to propose to our Colombian colleagues that they consider very carefully a number of questions. Is there not a contradiction in the draft resolution between the so-called "first-come, first-served" principle and the fundamental principles of the 1967 space Treaty, not to mention the requirements of the Charter of the International Telecommunication Union (ITU) and the procedures under the radiowave regulations? Is it not artificial to entertain a principle whereby the rights of one group of States are preferred over those of others? Practically speaking, this principle excludes the real possibility, within the framework of the ITU, of a compromise solution and a procedure for mutually acceptable agreement of interests.

The delegation of the Russian Federation believes that, within the framework of the Subcommittee under the leadership of the Chairman of the Working Group on nuclear power sources, a more rational solution adapted to contemporary conditions was developed with a view to further work to be done on this topic. We hope the Committee arrives at a far-sighted and justified resolution on this item.

In conclusion, we would like to emphasize that our approach to the assessment of the potential for the activity of the Legal Subcommittee is optimistic. We are fully prepared, and with the greatest good will, to consider the proposals of our colleagues and to support the dynamism of new ideas and any constructive trends in the discussions of the Subcommittee.

The Chairman: I thank the representative of the Russian Federation for his kind words of gratitude with regard to the excursion on Saturday.

Mr. Schrogl (Germany): The German delegation is pleased to state that the Legal Subcommittee made considerable progress in its discussions of the agenda item on space benefits. This indicates that the period of reorientation after the adoption of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space has now ended. While the deliberations on the subjects of delimitation and the geostationary orbit need more thorough discussion, and the review of the nuclear power sources Principles does not seem to be a priority for the time being, the agenda item on space benefits has gained a strong momentum.

That agenda item should therefore be addressed in a constructive way. However, under the current circumstances, and taking into account the open discussion during the last session of the Subcommittee, a further step has to be taken. The proposals made by last year's speakers give my delegation the confidence to explain in more detail the central points of our position on space benefits.

I would like to point out - and I believe all delegations will agree - that international cooperation in the exploration and utilization of outer space must be conducted in accordance with the provisions of international law, including the Charter of the United Nations and the Outer Space Treaty. It should be carried out for the benefit and in the interests of all States, irrespective of their degree of economic, social or scientific and technological development, and particularly taking into account the needs of developing countries.

International cooperation should therefore strive to allocate resources efficiently and to promote the development of indigenous capabilities for all States, while expressly taking into account the needs of developing countries. It is our firm conviction that on this basis States are free to determine all aspects of their cooperation in the exploration and utilization of outer space on an equitable and mutually acceptable basis.

I shall now turn to the concrete aspects of which modes of cooperation should be considered. Generally speaking, States are free to choose between different modes of cooperation, in the following categories: governmental or non-governmental cooperation, which can be effected on a global, regional or bilateral level, including cooperation between industrialized and developing countries, as well as between developing countries and between industrialized countries. All these activities can be effected on a commercial as well as a non-commercial basis.

In our opinion, States should choose on an ad hoc basis the most effective and appropriate mode of cooperation from these alternatives, with the aim of efficiently allocating resources.

As a general goal, cooperation should aim at coordinating national and international policies in the relevant field. States should mutually benefit from international cooperation involving sharing experience and learning together - as was so aptly stated in the recommendations of UNISPACE 2.

All activities involving the exploration and use of outer space which are conducted in accordance with the provisions of international law should be considered for international cooperation according to the guidelines just elaborated. Such activities include remote sensing of the earth from outer space, including the observation of the earth environment; management of natural and agricultural resources; oceanographic and meteorological observation and the prevention of natural disasters; use of telecommunications services; microgravity research and life sciences; and manned and unmanned space exploration.

My delegation has analysed the positions taken on space benefits during the last session of the Legal Subcommittee. My statement is an attempt to find common ground for positions that have thus far diverged. Our approach seeks to harmonize certain basic beliefs of developing countries and industrialized countries and to work out mutual objectives for space exploration and utilization that will be for the benefit and in the interests of all States.

My delegation is prepared to cooperate constructively in the further deliberations on this agenda item.

Ms. Betancur de González (Colombia) (*interpretation from Spanish*): Since this is my first statement to the Committee, Sir, allow me to express the pleasure of the delegation of Colombia at seeing you again guiding our debates with professionalism and dedication. The Committee is dealing with particularly important topics, such as an increase in its membership and the possible holding of a third United Nations conference on the exploration and peaceful uses of outer space (UNISPACE 3).

Colombia is fully in favour of admitting new members to this important body, so long as that is done on the basis of equitable geographic distribution.

As regards a third UNISPACE, Colombia believes that the changes on the international scene over the last decade show that today more than ever international cooperation in outer space activities is essential in order to guarantee that it is used for exclusively peaceful purposes. We therefore believe it appropriate to hold a third conference to update discussion of the topics discussed at the last UNISPACE and adapt them to the new international realities and new advances in space technology. Colombia favours the conference's being held in a developing country.

The Colombian delegation has taken the floor on this item in order to refer briefly to document A/AC.105/C.2/L.192 of 30 March 1993, entitled "Geostationary satellite orbit".

In its resolution 47/67 the General Assembly requested the Legal Subcommittee to examine

> "matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union". *(resolution 47/67, para. 4 (b))*

The document to which I refer was submitted by the Colombian delegation at the thirty-second session of the Legal Subcommittee in 1993 and was discussed and revised at the last session of the Subcommittee, which took place this past March.

The Colombian delegation would like to put on record its gratitude to Mr. Estanislao Zawels, the representative of Argentina, for having very ably conducted the deliberations and for the conscientious review of the document submitted by this delegation, which has been accepted by a number of countries represented here today.

We would also like to express our thanks to all the member States of the Committee for their criticism and useful comments, as well as for their active participation in the deliberations, which undoubtedly expanded our initial goal in presenting the document and fostered the kind of cooperation which has always been seen within the Committee and its subsidiary organs.

My delegation would request the Committee to continue to study this document, which many delegations have agreed is a good basis for discussion and negotiation. We urge that a final decision on this very important issue be taken at the next session of the Legal Subcommittee, given that the matter has been under discussion for a long time.

In conclusion, my delegation would like to refer to document A/AC.105/C.2/L.182/Rev.1, entitled "Principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes", which was submitted to the thirty-second session of the Legal Subcommittee in 1993 by the delegations of Argentina, Brazil, Chile, Colombia, Mexico, Nigeria, Pakistan, Philippines, Uruguay and Venezuela. We appreciate the work done by Mr. Raimundo González, representative of Chile, who headed the Working Group that discussed this document at the Subcommittee's last session. We would also like to emphasize and commend the expert statement by Mr. Edgar Telles Ribeiro, representative of Brazil, on behalf of the sponsors.

As a sponsor, Colombia would like the study of the document to continue, so that it may soon be approved. We are in favour of the establishment of legal principles guaranteeing equitable access to outer space activities and of broader international cooperation in this field.

Mr. Ramírez Landázuri (Ecuador) *(interpretation from Spanish):* My delegation hopes that the Committee will give a clear signal about the need to continue developing a legal framework for outer space and the geostationary orbit.

A number of important ideas have been advanced here about the appropriateness of moving towards the elaboration of norms such as those adopted by the world Conference on the Law of the Sea on such important matters as the question of resources considered to be the common heritage of mankind and the circumstances and needs of the developing countries.

The representative of the Russian Federation put forward the very constructive and positive idea that developing countries could develop a model covering preferences, services, the distribution of benefits and so on.

The work of the Legal Subcommittee has been very fruitful, resulting in the drafting of a number of significant international legal instruments on outer space matters. After many years of negotiation, the Subcommittee has promoted codification in areas where at first, there was no unanimity. We believe that this work should continue.

Studies and analysis by the Legal Subcommittee have been given renewed impetus at recent sessions with the presentation of the Colombian working paper on the geostationary orbit, the document of the Russian Federation on issues relating to the legal regime applicable to aerospace objects, the unofficial document of the Chairman of the Working Group on this subject and the document submitted by some members of the Group of 77 on draft principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes. There have been many comments and observations on all those proposals, enriching the debate and the negotiations and demonstrating the interest in continuing to analyse and debate these topics.

Allow me to refer now to the rules of procedure which were agreed after extensive deliberations by the member States of COPUOS. My delegation considers that the principle of flexibility is most important, because it helps our work and facilitates progress at our sessions. But we do not believe that the time available for the sessions of the Legal Subcommittee should be reduced. The items on its agenda, and those which may be added, are worthy of sufficient time for debate. If we happen to finish ahead of schedule, we can end the session then. What my delegation would not wish to see is an attempt to limit substantive debate within the Legal Subcommittee under the pretext of changes in procedure.

I would now like to touch upon the subject of the geostationary orbit, which has been tackled by both the Scientific and Technical Subcommittee and the Legal Subcommittee. My delegation believes that it is essential to set up a special legal regime, a *sui generis* legal regime, to regulate access to, and utilization of, the geostationary orbit, taking into account the fact that it is a physical entity with special technical characteristics and attributes which link it to gravitational phenomena created by the Earth, and which occur solely on the equatorial plane; that, in turn, means that there is a special relationship between the geostationary orbit and the equator. The legal regime to which I refer should take into consideration this fact and the rights of all States to benefit from the orbit, taking into account the needs of the developing countries.

This would give us an unambiguous frame of reference guaranteeing access to, and utilization of, the geostationary orbit exclusively for peaceful purposes, to the benefit of mankind as a whole, taking into account the interests of all States, particularly those which, lacking technical and financial resources, have not yet been able to develop their interests or to exercise their rights. It is therefore essential to draw up international instruments and coordinate them with existing ones.

Access to the geostationary orbit, a limited natural resource, and its conservation, utilization and benefits, are matters of interest to all mankind. It is essential to avoid its over-exploitation and saturation, as well as contamination by space debris. Therefore, satellites should be transferred to an elimination orbit just before they finish their useful life.

In the light of the problem of the saturation of this limited, finite natural resource, the international community must lay down the safeguards necessary to guarantee future access by all States to the geostationary orbit, giving preference to States that have been unable, owing to technological or financial limitations, to have access.

Mr. Forna (Romania), Vice-Chairman, took the Chair.

Mr. Ramírez Landázuri (Ecuador) *(interpretation from Spanish):* We are pleased that other delegations have referred to the question of space debris. We welcome the Polish proposal that the Committee officially recommend that, in order to prevent the saturation of the geostationary orbit, satellites now in that orbit be moved out of it before the end of their useful life. At the last session of the Legal Subcommittee my delegation supported the convening at a coming session of the Subcommittee of a seminar on the question of space debris in the geostationary orbit. We reiterate our support for that initiative.

Positive, consistent development of the legal aspects of the geostationary orbit is needed if the Committee is to continue in accordance with the General Assembly's mandate. Hence, my delegation considers it essential to coordinate our work with that of the International Telecommunication Union (ITU), whose important responsibilities - very technical - in this area are limited to telecommunications and frequencies; the work of COPUOS, specifically its Legal Subcommittee, concerns the legal aspects - and the resulting political aspects - of the geostationary orbit.

My delegation takes note of the Russian proposal regarding a clear demarcation between the ITU on the one hand and COPUOS and its subsidiary bodies on the other. My delegation considers that COPUOS should retain its area of competence and engage in a study of the legal and political aspects of the geostationary orbit, while the ITU should limit itself to the technical area; this would prevent duplication of work and would achieve the complementarity we all desire.

My delegation views the proposal on dividing the item on the definition and delimitation of outer space and the geostationary orbit as inconsistent, even though the latter deserves special study because of its specific technical characteristics. My delegation has long supported consideration of the definition and delimitation of outer space, but for well-known reasons it has not been completed. We support a definition and delimitation of outer space retaining the criterion of a *sui generis* legal regime independent of or complementary to that regarding atmospheric space.

My delegation will continue to participate in the informal meetings regarding the organization of the work of the Committee and, especially, its Legal Subcommittee; we are grateful for these consultations, and trust that they will improve our working methods. We also trust that should new topics be found they will be added to those already before us.

Mr. Fiuza Neto (Brazil): The Brazilian delegation considers this to be a most important item of discussion in the light of the work of the thirty-third session of the Legal Subcommittee and of the specific ideas on how to conduct its future work put forth by some delegations in our recent informal consultations.

Frequent reference is made to the fact that COPUOS, and in particular its Legal Subcommittee, must examine ways of utilizing available conference facilities more efficiently. While this is certainly true, it seems, as we have had occasion to mention before, that for some delegations the efficient utilization of resources has come to be synonymous with a reduction in the length of our sessions, particularly in the case of the Legal Subcommittee.

The Brazilian delegation continues to feel that the Legal Subcommittee is the heart and soul of COPUOS, and as such should be its most dynamic component. After all, one of the primary goals that led to the creation of this Committee was to examine legal problems which might arise in programmes to explore outer space.

As we know, the Subcommittee is at present addressing three items, one of which, that on nuclear power sources, is, at least for now, dormant. A second item brings together two different topics: the geostationary orbit and the question of the definition and delimitation of outer space. If these questions were interrelated at one point, today their relationship would perhaps justify their treatment as separate items. The question of outer space benefits, on the other hand, has provided the Subcommittee with some interesting discussions and with hope for significant progress.

Yet the most troubling aspect of the Subcommittee's agenda is what is not to be discussed. Fortunately, the consultations to be conducted by the Chairman of the Legal Subcommittee at the 1995 session as a result of a recommendation of the Committee will begin to address this point. Without prejudging the outcome of these consultations, I would like to suggest, as an additional input, that the idea put forth by my delegation regarding a seminar on the legal implications of the existence of space debris in the geostationary orbit be retained.

In addition, the case for discussing the question of space debris in the Legal Subcommittee has been made by experts in the field of international space law. With regard to space debris in particular, the representative of the International Law Association (ILA) pointed out that

> "The ILA certainly feels that, at the very least, information on that agenda item should be exchanged between the two Subcommittees of the Committee on the Peaceful Uses of Outer Space". *(A/AC.105/PV.395, p. 7)*

What is more interesting, however, is that since 1990 the ILA has been engaged in the elaboration of an international instrument regarding space debris. Meanwhile, the Legal Subcommittee has been deprived of even the possibility of discussing the topic.

In short, as most representatives agreed last Friday, what really matters is not the length of the session but the substance of the agenda. If the Subcommittee were to address all possible items, then three weeks would hardly be sufficient.

The set of rules adopted in 1993 by the Subcommittee provided for a great deal of flexibility in conducting its work. These rules, which resulted from intense negotiations, were applied for the first time this year, with significant success. It is interesting to note that the Subcommittee achieved a high efficiency rating this year, well above the average for the Organization as a whole.

I now move on to the items currently on the agenda. The Legal Subcommittee held some very interesting discussions this year, particularly with regard to outer space benefits. The Brazilian delegation sought to set forth the rationale behind working paper L.182/Rev.1, sponsored by 12 countries, in order to - as they say in my country - "get the ball rolling". Fortunately, our effort was rewarded with some extremely constructive comments and criticism, expressed in an organized and systematic fashion.

This constructive attitude on the part of delegations indicates that there is considerable room for progress on the debates on this item in future sessions of the Subcommittee. The first step will have to be for the sponsors to revise working paper L.182/Rev.1, which, we trust, will bring closer together delegations which have so far held widely differing views on this matter. Brazil is ready to work with the sponsors before the 1995 session in order to arrive at a satisfactory set of principles.

On the question of the geostationary orbit (GSO) there was little substantive progress, although interesting views were expressed by some countries. The Brazilian delegation, for its part, attempted to inject some life into the debate by suggesting the organization of a seminar on space debris in the GSO, as has already been mentioned.

Regarding the topic of definition and delimitation, there was some progress with regard to the definition of the questionnaire on aerospace objects, through the drafting of introductory paragraphs to place the text in the appropriate context.

In spite of the lack of significant substantive progress on these questions, we believe that the informal consultations held by the Working Group on item 4 during the Subcommittee's thirty-third session were extremely fruitful, especially from the point of view of the exchange of information, to the benefit of many delegations. We believe that informal consultations constitute an important means of facilitating the discussions on the items addressed by the Subcommittee. Sufficient time should thus be allowed for such consultations in future sessions.

As regards the item on nuclear power sources (NPS), the Brazilian delegation believes that the decision made by the Working Group to suspend its activities for the 1995 session is in line with the consensus in the Subcommittee to the effect that no revision of the principles on NPS should be undertaken at this time.

Mr. Zhu Wenqi (China) *(interpretation from Chinese)*: The Chinese delegation has always attached great importance to the work of the Legal Subcommittee, since it has an important bearing on the relevant international space law on the formulation of legal criteria guiding space activities, the reduction of conflicts in space activities and the promotion of international peace and security. With the rapid development of space science and technology, all countries are paying great attention to the development and perfection of space law. The Chinese delegation has always actively participated in the legal work related to space activities in order to ensure and promote the development of space affairs. Here I should like to make some comments on the work of the Legal Subcommittee, as well as on its report.

With respect to the issue of space benefits, the Legal Subcommittee continued during its session this year the discussion of a working paper entitled "Principles regarding international cooperation in the exploration and utilization of outer space for peaceful purposes". The Chinese delegation is of the view that the working paper is of practical and positive significance. Some of the principles contained therein deserve full attention, for instance the principles that international cooperation in space should be pursued to enable all countries to develop their own space capabilities and enjoy the benefits of space; that the exchange of expertise and technology for the benefit of developing countries should be promoted; that space material and equipment should be transferred at reasonable and fair prices; that the environment should be protected during the carrying out of space activities; and that the spin-off benefits of space technology should be redistributed in a fair manner, with consideration for the needs of developing countries. Needless to say, the search for a solution to all these problems is still fraught with difficulties at this stage. However, this document is a good basis for our work and discussion of this paper will contribute positively to the solution of these problems.

With respect to the issue of the definition and delimitation of outer space, the Chinese delegation believes that, since countries still have fairly great differences of opinion on this issue, the time is not yet ripe for the matter to be settled. We believe that we can invite the International Civil Aviation Organization (ICAO) to present its opinion on the legal aspects of the flights of aerospace objects and on the delimitation of air space.

As for the issue of the geostationary orbit, the Chinese delegation believes that an examination of this issue by the Committee will not conflict with the functions and responsibilities of the International Telecommunication Union (ITU). Rather, such work will be complementary. The work of this Committee will fill in the legal gaps in the relevant ITU regulations. For instance, the use of the geostationary orbit exclusively for peaceful purposes, which is not an issue likely to be dealt with by the ITU, is expressly within the mandate of this Committee. Also, the issue of clearing space debris is also within the Committee's mandate.

With regard to nuclear power sources (NPS), principle 11, on the review and revision of the 1992 Principles relevant to the Use of Nuclear Power Sources in Outer Space, stipulates that these principles shall be reviewed and, if necessary, revised no later than two years after their adoption. Even though this agenda item was not substantively discussed at the last session of the Legal Subcommittee, the Chinese delegation considers that this is a very important item of the Legal Subcommittee's agenda and is a matter of concern for all Member States. Therefore, we agree that this item should be retained on the Subcommittee's agenda.

With respect to the review and revision of the Agreement governing the activities of States on the Moon and Other Celestial Objects, the Chinese delegation is of the view that even though the review of this Agreement has been listed by the Secretary-General as an agenda item for the General Assembly this year, as provided for by the Agreement itself, so far only nine countries have ratified this Agreement and five others have signed it, so that any revision should be carried out with prudence and on the basis of wide consultations with all Member States.

Mr. Wiryosumarto (Indonesia): As regards the item under consideration, my delegation would like to associate itself with the previous speakers in thanking the Secretariat for its commendable work in preparing document A/AC.105/573, the report of the Legal Subcommittee on the work of its thirty-third session.

My delegation is of the view that the utilization of nuclear power sources (NPS) in outer space is a matter of common concern for the international community, as it could affect the environment and the safety of human lives. To this end we would like to reaffirm the importance of strict adherence to the Principles relevant to the Use of Nuclear Power Sources in Outer Space. In this regard, my delegation appeals for further study by the Legal Subcommittee of the legal aspects related to the development of NPS technology, taking into consideration the results of studies of its scientific and technological aspects.

On the question of the geostationary orbit as a limited natural resource, my delegation is of the view, taking into consideration the need for rationality and equity in the guiding principles in planning its utilization, that the discussion of this matter should remain on the agenda of the Legal Subcommittee.

My delegation believes that we should redouble our efforts in considering the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries. We hope that in the deliberations we will be able to explore and elaborate further on the constructive approach to international cooperation in outer space activities, in which all the results of the exploration and exploitation of space could be shared for peaceful purposes and for the common benefit of developed and developing countries.

In these constructive deliberations, the paramount considerations with regard to international space cooperation for the peaceful uses of outer space and for its benefit to all mankind should be the principles of access to space technology and applications; the development of indigenous capabilities of all States in space science and technology and their application; and sovereignty.

Mr. Perek (Czech Republic): We consider the geostationary orbit to be very important. There are some problems which require discussion. One is the coordination of the motions of satellites which have been assigned the same nominal position. So far, this coordination has remained dependent on the goodwill of the individual participants, but we have no international agreement in this respect.

The second problem is space debris in the geostationary orbit. In particular, the fact that objects smaller than one metre are not observable at this time is of great importance. We are of the opinion that the geostationary orbit is highly important to countries at all geographical latitudes. I myself have seen antennas pointed to satellites in the geostationary orbit very close to the north polar circle.

We fail to see the connection between the question of the definition of outer space and the geostationary orbit, for the following reasons. Paragraph 5 of the Colombian document, reproduced in annex IV of the report of the Legal Subcommittee, states that

> "the geostationary satellite orbit is part of outer space".

Secondly, in the Legal Subcommittee, the question of the definition and delimitation of outer space and the question of the geostationary orbit were discussed separately, and there was no connection between them.

These are the two main reasons why we would propose the separation of the two items. The past arrangement, under which they were discussed together, did not speed up progress on either of the two questions, so why not try separate discussions under two different agenda items?

Mr. Bojilov (Bulgaria): My delegation would like to make a few remarks and some comments on the report of the Legal Subcommittee. Its work on item 3 on its agenda, "Question of early review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space", was predetermined by the view of the Scientific and Technical Subcommittee, namely, that the Principles should remain in their current form until such time as they are amended, and that before amendment proper consideration should be given to the aims and objectives of any proposed revision.

In the light of this conclusion, it seems to my delegation natural and logical that any revision of the Principles should await the result of the scientific and technical debate on the matter. Therefore, we support the cautious approach of the Working Group of the Legal Subcommittee, which on the one hand recommended that consideration of that item be suspended for one year, pending the results of the work of the Scientific and Technical Subcommittee, and on the other concluded that the item should be retained on the agenda of the Legal Subcommittee.

I am afraid that my delegation is unlikely to say anything new on item 4, "Matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit". We share the view expressed by some delegations at the current session that the linkage of two different issues in one item is hardly the most appropriate approach to the solution of the problems involved. The challenge remains unchanged. The real problem is how to find a way out of the existing deadlock, for as long as there is no progress in the work of the Legal Subcommittee it will be difficult, even impossible, to avoid unflattering comments to the effect that COPUOS has turned into an international debating society.

In a way, it is encouraging that some progress was achieved on item 5, "Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interest of all States, taking into particular account the needs of developing countries". The constructive debate during the thirty-third session of the Legal Subcommittee gives hope that it may be possible to develop a new consciousness of the importance of international cooperation.

The changes of paramount importance in the international political situation that we have witnessed and lived through over the past several years set the premises and call for innovative approaches to global problems, so that all countries may reap the many practical benefits of space technology and its applications. Owing to the efforts deployed by the Committee and its subsidiary bodies, five international legal instruments were concluded in the past: a Treaty and an Agreement in the 1960s, two Conventions and an Agreement in the 1970s and two sets of Principles in the 1980s.

Unfortunately, during the 1980s the Legal Subcommittee slowed the pace of its activities and practically interrupted the process of developing and elaborating legal norms. In fact, 12 years of discussion resulted only in a set of Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

It is beyond any doubt that our task requires careful and deliberate consideration, so that we may develop international space law based on consensus. As space technology continues to advance in the coming years, the Legal Subcommittee is duty-bound to focus its attention, as soon as possible, on substantive matters and to intensify its efforts to promote international cooperation by developing legal principles and norms for the benefit and in the interest of all States.

Some of the ideas contained in the report (A/48/221) of the Secretary-General entitled "International cooperation in space activities for enhancing security in the post-cold-war era" may well be a source of inspiration for the future work of the Legal Subcommittee and of this Committee as a whole.

The meeting rose at 11.55 a.m.